

DESIGN

NORMAN

BEL

GEDDES

PENCIL  
POINTS

1937

JANUARY



WHAT DOES

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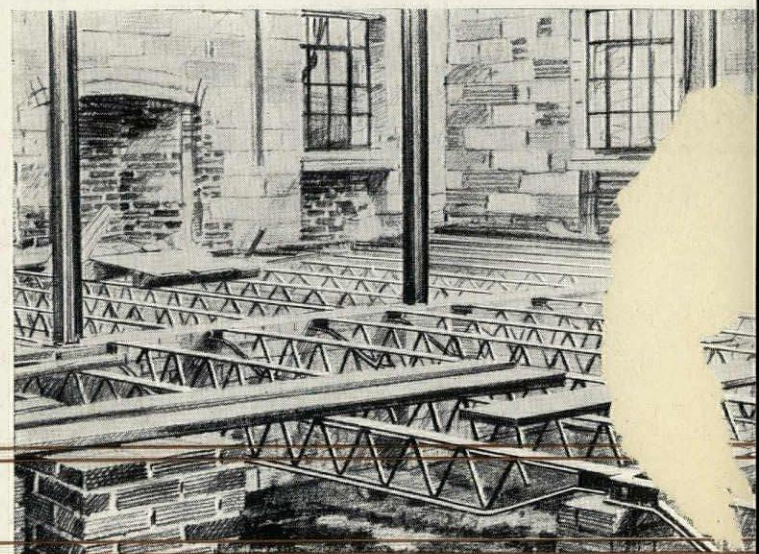
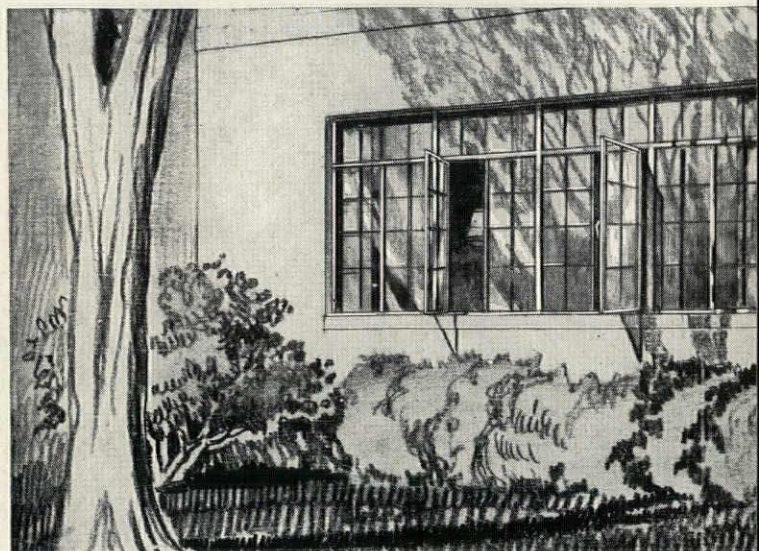
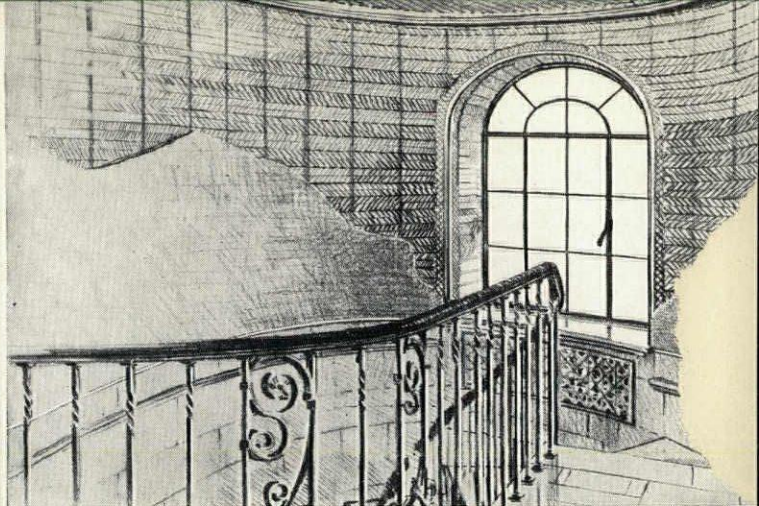
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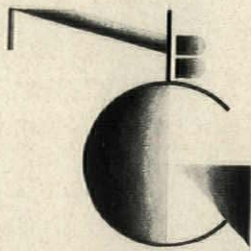


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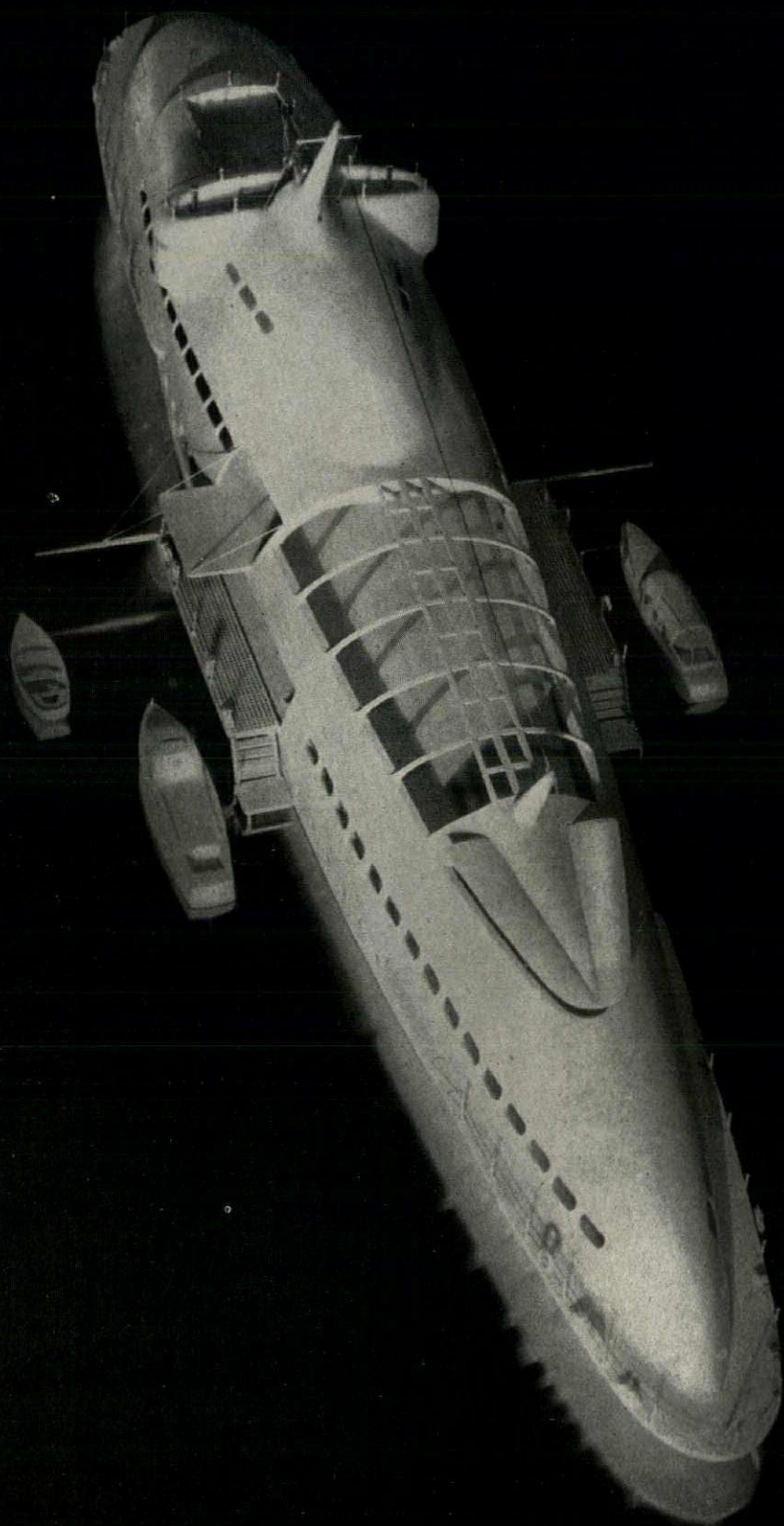
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Truscon's nation-wide network of 57 sales-engineering offices, 27 warehouses and over 6000 dealers makes Truscon Steel Company your "next-door-neighbor" regardless of where you are located.









*LOOKING DOWN from stern end on model of special streamlined Diesel yacht designed by Norman Bel Geddes for Axel Wenner-Gren. Streamline principles, hitherto confined for the most part in ship design to the hull alone, have here been used throughout, promising greater seaworthiness, comfort, and efficiency. In stormy, cold, or rainy weather, all decks are to be closed in, shedding water easily and providing complete protection for passengers (1934)*



# MASTERS OF DESIGN

## 2—NORMAN BEL GEDDES

BY KENNETH REID

YOU never know, when you step down in front of the 128 East 37th Street brownstone and open the unpretentious door marked with a simple brass plate inscribed "NORMAN BEL GEDDES & COMPANY," what personage of art, science, or business you may encounter in the little reception lobby beyond. It might be anyone from Gene Tunney to Max Reinhardt, from Walter Chrysler to Colonel Lindbergh, from Amelia Earhart to Frank Lloyd Wright. For this man Geddes, for whom life began with practically nothing 43 years ago in the little town of Adrian, Michigan, has by his significant work and by his positive personality drawn to himself as advisers, associates, clients, and friends scores—yea, hundreds—of leading spirits from the theatre, from the laboratory, from the arts, and from the realms of industry.

When I say that he started out with "practically nothing," I am speaking, of course, in a material sense, for he must have inherited from both of his parents qualities of physique and psyche that predestined a life of some accomplishment. His father was of Scottish and his mother of German origin. They gave him good health and the racial attributes of persistence, thoroughness, orderliness, practicality, and courage that have carried him since through many difficulties on his way to the position of world-wide eminence he now occupies in the two not wholly unrelated fields of Theatre Arts and Industrial Design.

It is my feeling that to understand the man's work as a designer, which is properly the subject of this presentation, it is necessary to know something of the man himself, of his background, of the course he has traversed. A brief survey, then, of these matters is perhaps in order. They fall into a pattern.

In his own words he was "just a poor kid," forced by his father's death, which occurred when he was thirteen, to assume responsibility from then on of helping to support his mother and younger brother. His schooling was irregular, being much broken up by changes of residence, and the public schools of five states

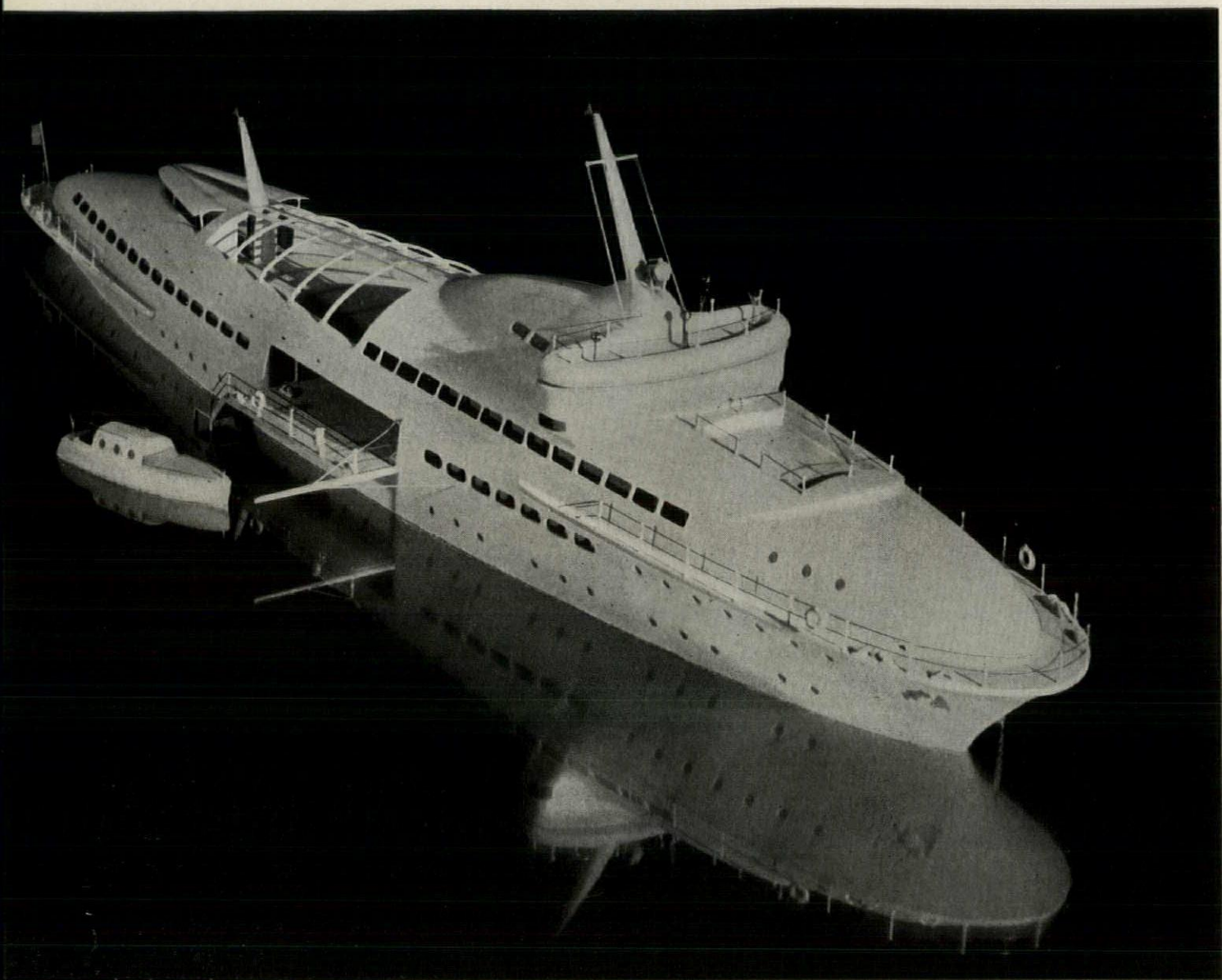
—Michigan, Ohio, Pennsylvania, Illinois, and Indiana—may boast, if they choose, of having had a part in his formal education. (New Philadelphia, Ohio, was the scene of its close in 1910 when he was expelled from the ninth grade for having drawn a caricature of the principal on the blackboard.)

During these school years he worked variously in vacations and at odd times, doing anything from delivering groceries for his grandfather's store to acting as bellboy on a lake steamer that ran between Cleveland and Buffalo. On one trip of this boat he met and made friends with Keller, the famous magician, who taught him sleight-of-hand tricks and, in so doing, perhaps whetted his already budding interest in the stage. Young Geddes worked diligently at the sleight-of-hand, practicing up between visits to Buffalo to see Keller, and finally appeared successfully for a summer in vaudeville in small towns of Ohio, where his family then lived, as "Zedsky, the Boy Magician." A later essay as "Bob Blake, Eccentric Comedian," however, failed dismally. These ventures, please observe, antedated his expulsion from school.

That principal must have been either an insufferable "stuffed shirt" or an irresistible "cartoonist's friend," because James Donahay, well-known artist on the staff of the Cleveland Plaindealer, had some years previously at the same school obeyed the same urge to caricature that had caused Geddes' downfall. He had enjoyed the same fate and, hearing about Geddes, wrote him sympathetically offering to help him. What's more, he did help him, and enrolled the boy in the Cleveland School of Art. For some reason, however, Geddes was not happy at that school and left after three months, impatient of the restraints to his progress imposed by a fixed curriculum.

He went to Chicago, where he attended the Art Institute briefly until he met Hendrik Lund, the celebrated Norwegian painter, who took an interest in him and advised him to leave art school and go his own way. Wishing to continue his art studies on his own, and





*THIS VIEW of Mr. Geddes' yacht model and the one opposite show her from forward with decks open and then completely closed. The ship was designed to be 231' long with 37' beam and 12'6" draft. She is to displace 1400 tons and will carry 8 passengers, 30 crew, 2 personal servants, and a nurse and secretary. Her speed will be 16 knots and her cruising radius 10,000 miles. In this view the convertible lounge deck cover is in position as an awning while the sun deck is entirely open. The launch door amidship is open with a launch alongside. The forward observation deck has been lowered for passenger use with its demountable railing in place. This design is a fine example of Geddes' insistence upon thinking a problem through completely, not being stopped by traditional limitations, but applying to the whole and to all details the full fruits of available scientific knowledge to the end that the completed thing shall be as perfectly formed to its purpose as he and his staff can make it*



feeling the need of a better working knowledge of anatomy, he turned to—of all places—the morgue! The first few visits were a bit trying, as may be imagined, but after that he got along famously, repairing to the ghastly studio nightly over a considerable period until he could draw the human figure, in the most contorted position and from any point of view, constructively and correctly.

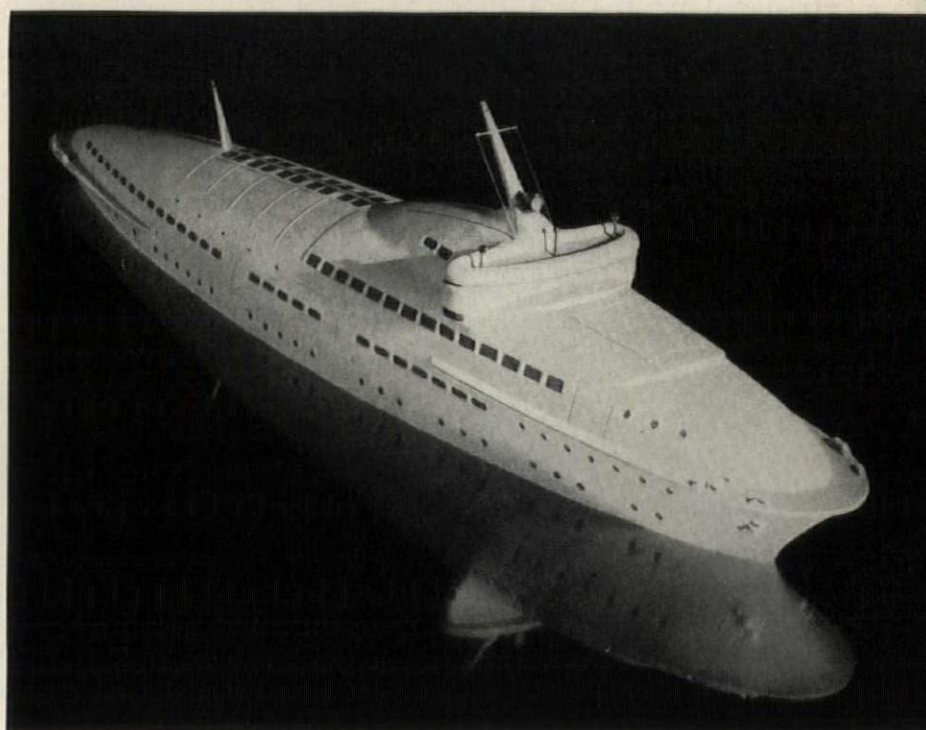
During this period he worked as a bus-boy in a restaurant in exchange for his meals and also as a super for the Chicago Opera Company. He finally got his first job as a designer with the Barnes-Crosby Company doing advertising illustrations at a salary of \$3.00 a week. Six weeks of this was enough. With Lund's encouragement he turned to drawing and painting portraits from life, seeking and obtaining commissions to do such distinguished subjects as Mme. Schumann-Heink, Frederick Stock, Brand Whitlock, Titta Ruffo, John Wanamaker, and Edwin Drummond Libby. Incidentally, his engaging personality and the youthful enthusiasm and skill with which he carried out these commissions won the real and lasting friendship of these celebrities. His contact with them helped him to eliminate from his system all traces of youthful shyness in the presence of greatness and established his confidence in himself as the peer of any man—a valuable characteristic.

Times became a little dull in the free-lance art field, necessitating an interlude of more substantial earnings as manager of a laundry in Ann Arbor, Michigan. Thereafter, how-

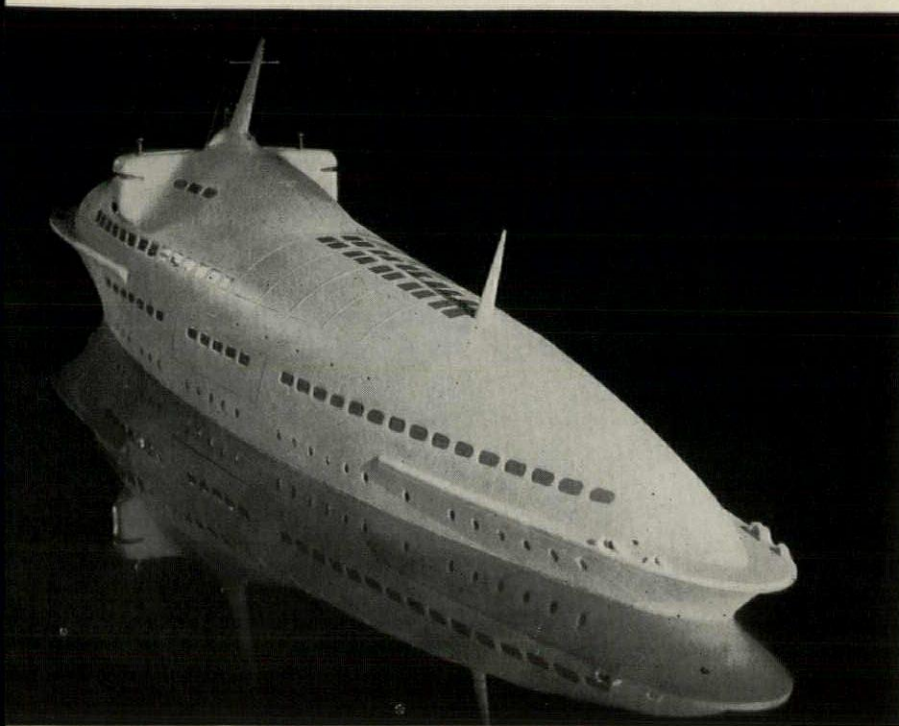
ever, in 1914, Geddes went to Detroit and entered into an association with the Peninsular Engraving Company wherein he received no salary but was allowed to compete with their designers and was paid for successful efforts. He won the majority of the competitions he entered and after six months was made Art Director of the company. The assured livelihood that went with this position freed him from pressure and allowed him to indulge his persistent interest in the theatre where his imagination had more leeway. He began to write plays and plan their staging. It was all done on paper and in his mind but he worked over the problems just as thoroughly as though they were really in production. During these studies he originated the "Diagonal Axis Theatre."

In 1915 he graduated into comparative affluence when the Barnes-Crosby Company (which had employed him at \$3.00 a week in Chicago) made him Manager of its new Detroit branch office at \$125 a week and a 5% commission on sales besides. In that year also he sold his play of American Indian life, "Thunderbird," to Aline Barnsdall of Los Angeles.

Geddes was devoting so much of his spare time now to his writing of plays and his study of the theatre that his employers felt that these activities were taking his best attention away from their business. They issued an ultimatum. Either he must give up the theatre or lose his job. Though he had just taken on the added responsibility of a wife, he sensed that his real







vocation was the drama and its production and chose to risk his future in the work he really loved. The sale of his play gave him the chance he needed. He went to Los Angeles to assist in the staging of his own and five other plays. "Thunderbird," however, was postponed to the following season and was never produced.

During 1916 he designed settings and costumes for nine plays, profiting greatly by the experience and gaining his first taste of practical theatre technique. Simultaneously, he introduced for the first time the use of focus spot lamps as the sole means of lighting the stage.

From that time on Geddes' principal interest for ten years lay in the theatre. When work failed in the west he introduced himself by transcontinental telegraph to Otto H. Kahn in New York so persuasively that Kahn sent him expense money to move himself and his family to the east where he was turned over to Gatti-Casazza at the Metropolitan and put to work designing scenery for the production of *Shanewis*, an American opera. This led to other operas and stage presentations almost without cessation up to the present moment.

In the theatre his work is so generally well known that it need not concern us here in detail. Suffice it to say that he has in the last twenty years played one vital part or another in about 180 theatrical productions, many of them outstanding successes. *The Divine Comedy*, *The Miracle*, *Ziegfeld Follies*, *Lysistrata*, *Hamlet*, *Lady Be Good*, the current *Dead*

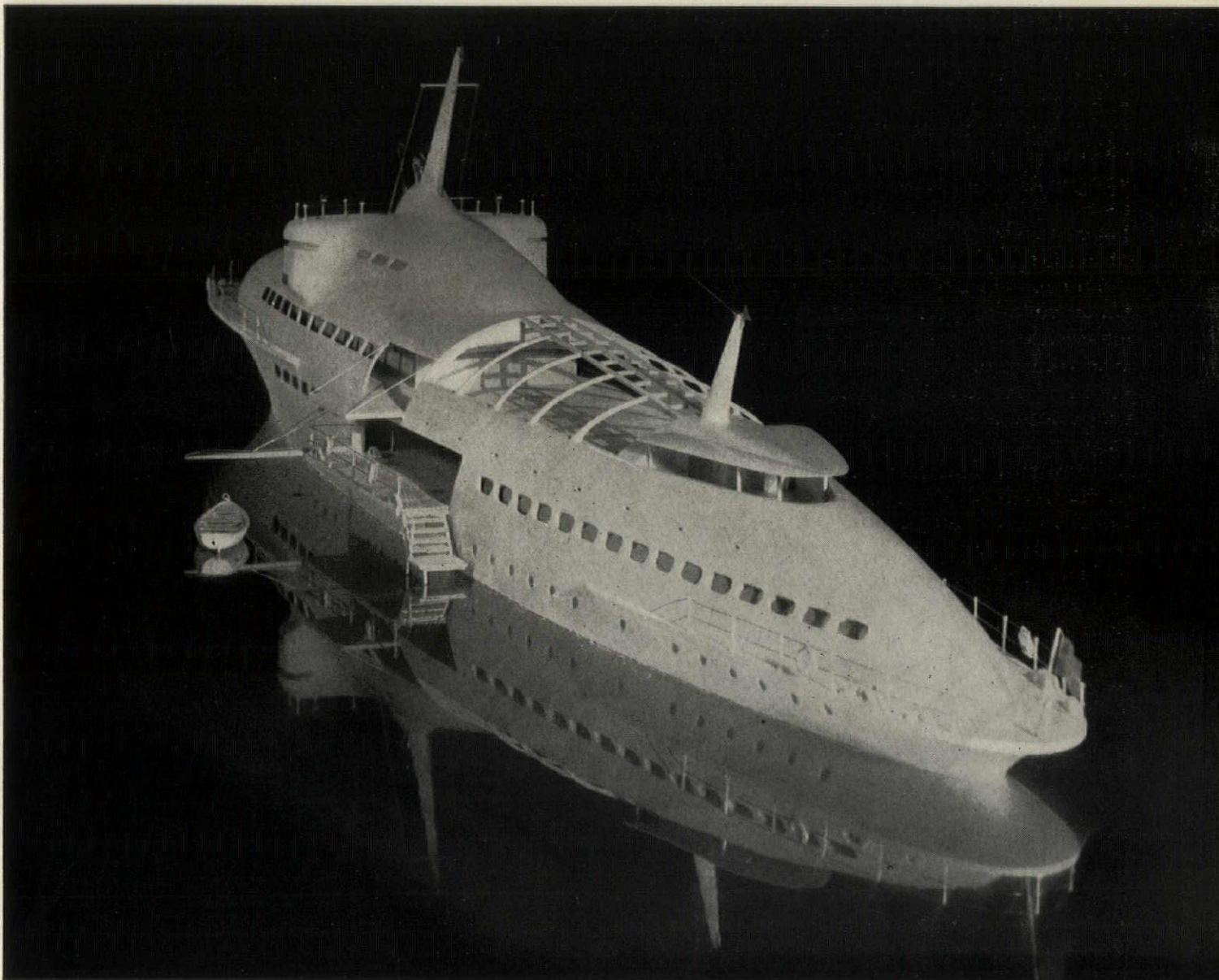
*End*, and *The Eternal Road*, just launched, spring to mind as effective examples of his masterly touch. He has been designer of sets, costumes, and lighting and architect of the theatres themselves; he has been actor, editor, playwright, director, producer, and inventor of stage appliances and machinery; he has contributed important ideas that have advanced the art and technique of the stage. Few, if any, living men have had such all-round experience in every phase of dramatic presentation.

About 1927 he took up what was at first a hobby and developed it into a second career which has since proceeded parallel with the first. It was in the young profession of Industrial Design.

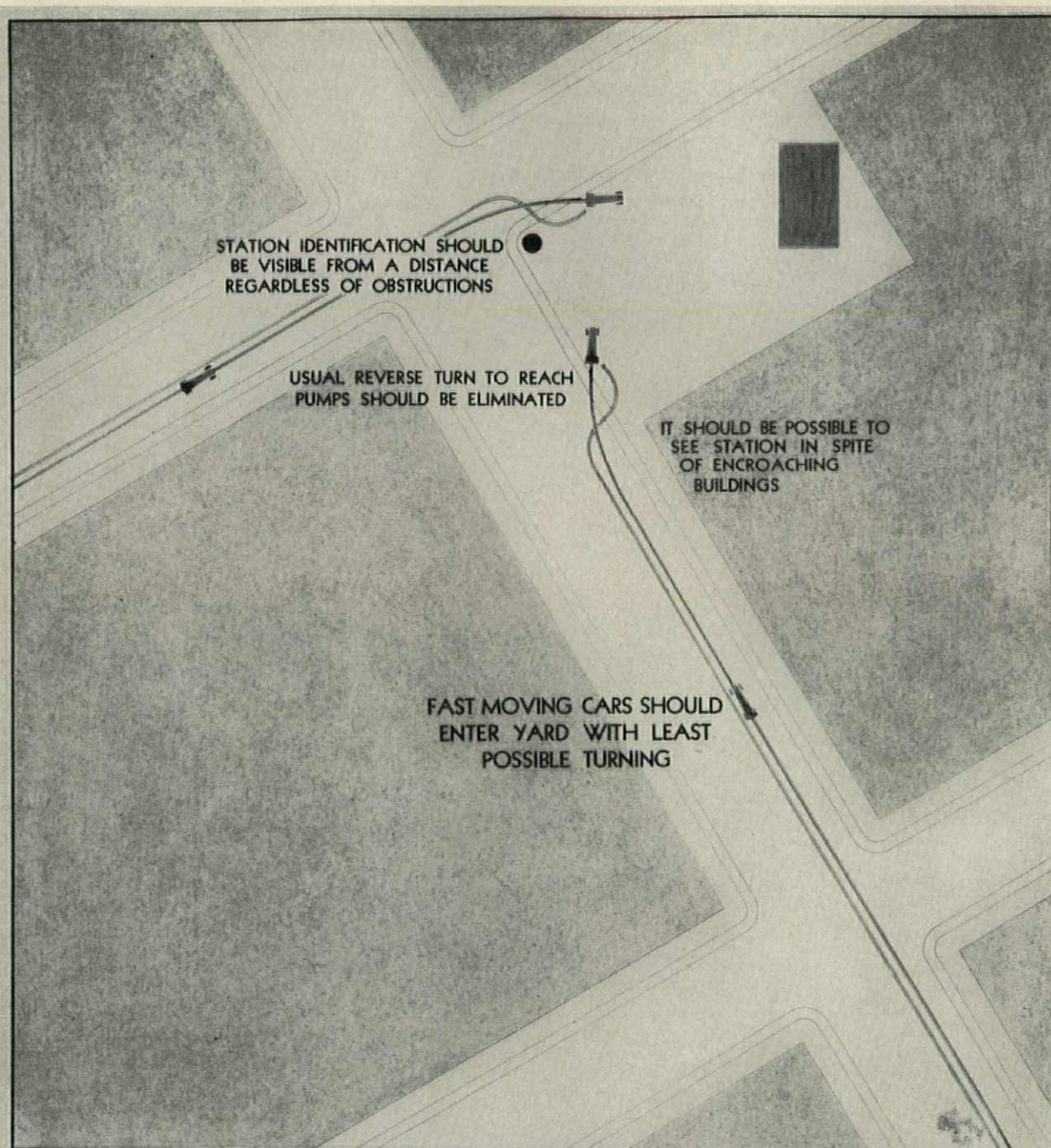
In the theatre he had been creating beautiful pictures, making compositions with line, mass, color, light, movement, ideas. Now he was to seek another type of beauty, the beauty of clean, purposeful form, of "perfection for use," as applied to industrial products. In the theatre his designs were often fixed in period by the context and consequently were appropriately based on historical forms. In this new activity everything was fitted to contemporary life and the forms, materials, and processes had to be those of today and, so far as could be foreseen, of tomorrow. Only if an old form or material or process could not be improved upon for the purpose sought, might it be used. The whole mass of scientific and technical knowledge was to be drawn upon to the limit in solving the problems of the new



HERE AND ON the facing page are the open and shut views of the yacht model as seen from the port side astern. Every thinkable provision has been made for comfort and safety. The deck covers are insulated and the interior is to be heated and air conditioned, the forward mast serving as air intake and the after mast as exhaust for both engine room and air conditioning system. Partitions of passenger accommodations and social rooms are to be soundproof and the most modern fire protection, detection, and extinguishing apparatus will be installed. Owner's and crew's lifeboats and launches will be carried inside the shell and are arranged to be loaded inside and launched from either side through the doors which lower to the horizontal position where they also act as landing platforms. Passenger accommodations will be larger than usual on conventional yachts of the same tonnage, Mr. Geddes having provided about 2100 square feet for the four social rooms and 1100 for staterooms



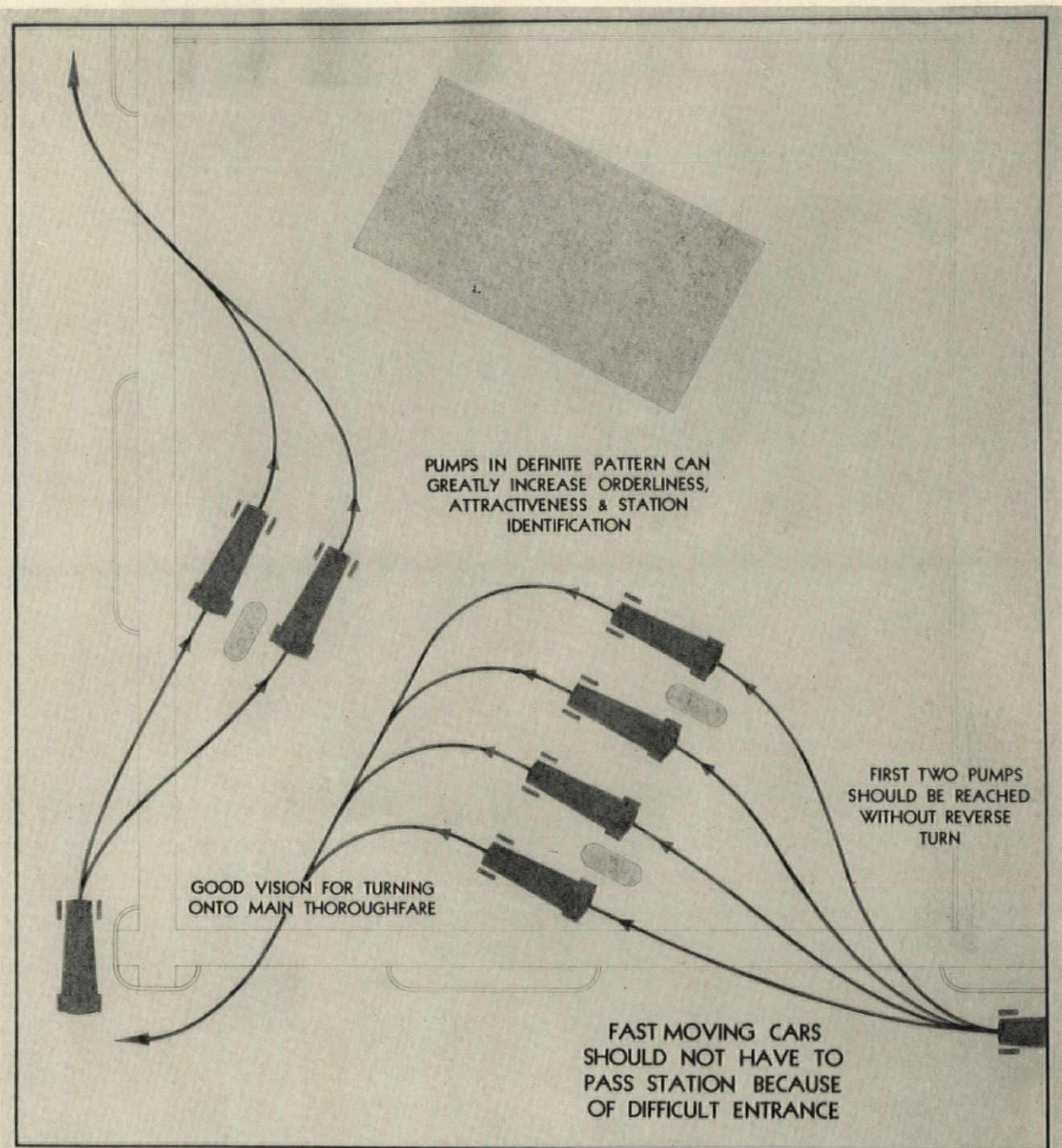




**I** STATION SHOULD BE SEEN AND IMMEDIATELY RECOGNIZED IN TIME TO DRIVE IN

A THOROUGH STUDY of service stations made by Geddes in 1934 for the Socony Vacuum Oil Company, Inc., resulted in a number of recommendations which were placed graphically before busy officials and directors by means of a series of twenty-four charts of which the above is the first. Each chart was designed to make one point of the findings immediately clear in simple direct terms. The whole set covered the basic points of a complex report. Among its conclusions were contained the recommendation that future stations should be of prefabricated construction, mostly salvageable, and that they should be so designed as to help increase the lubrication business and the sale of specialty articles as well as the regular gasoline trade. The key design of a station embodying the suggested improvements was included with the report and a model built to visualize how it would work, several views of which are shown on following pages

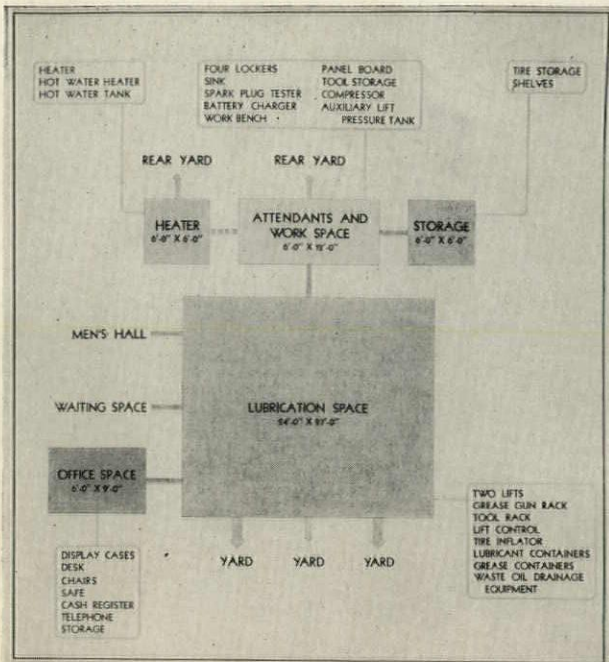




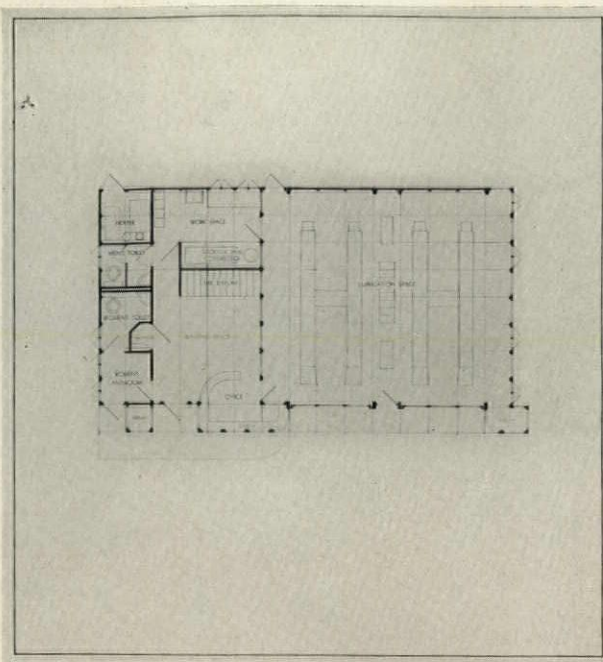
## 2 EASE OF ACCESS TO YARD SHOULD HAVE PREFERENCE OVER EASE OF EXIT

THE ALMOST primer-like simplicity of these charts which Mr. Geddes uses so effectively in his dealings with clients has sound psychological basis. The method promotes clear understanding by all parties and focusses attention upon one point at a time in such a way that it can be quickly grasped. Nothing essential can be overlooked as it might if a complete drawing of the whole scheme were laid before the clients for discussion. The adoption of such a technique came naturally perhaps to one so long associated with the theatre but the fundamental thought behind it could well be used by many an architect who has suffered embarrassment and even loss where a client has not understood something on his plans. In this service station study it appears reasonably certain that every innovation visible on the completed model was there because it had been logically worked out as a feature that would contribute to better business

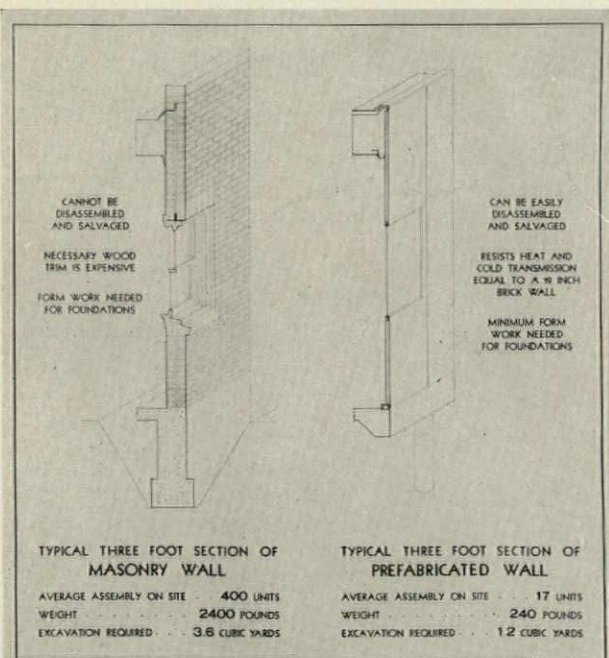




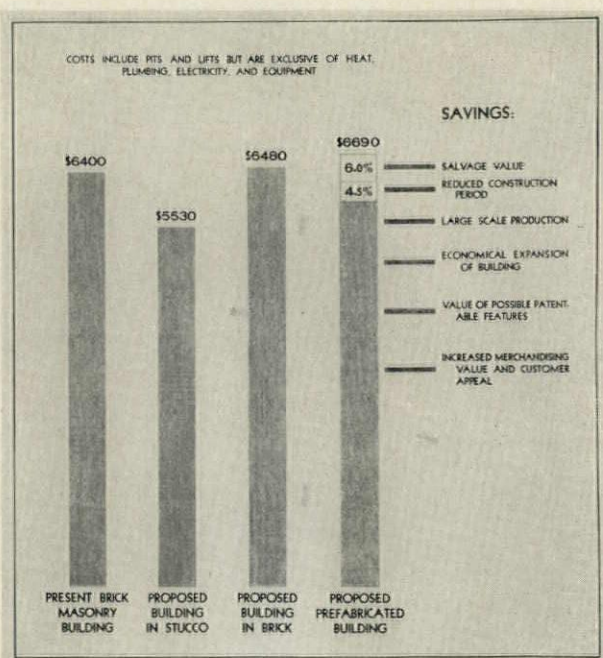
**9** PROPER RELATION & CIRCULATION OF SERVICE SPACES ARE ESSENTIAL TO AN EFFICIENT EFFECTIVE STATION



**13** COMPLETE DEVELOPMENT OF TYPICAL PLAN USING STANDARDIZED UNIT CONSTRUCTION



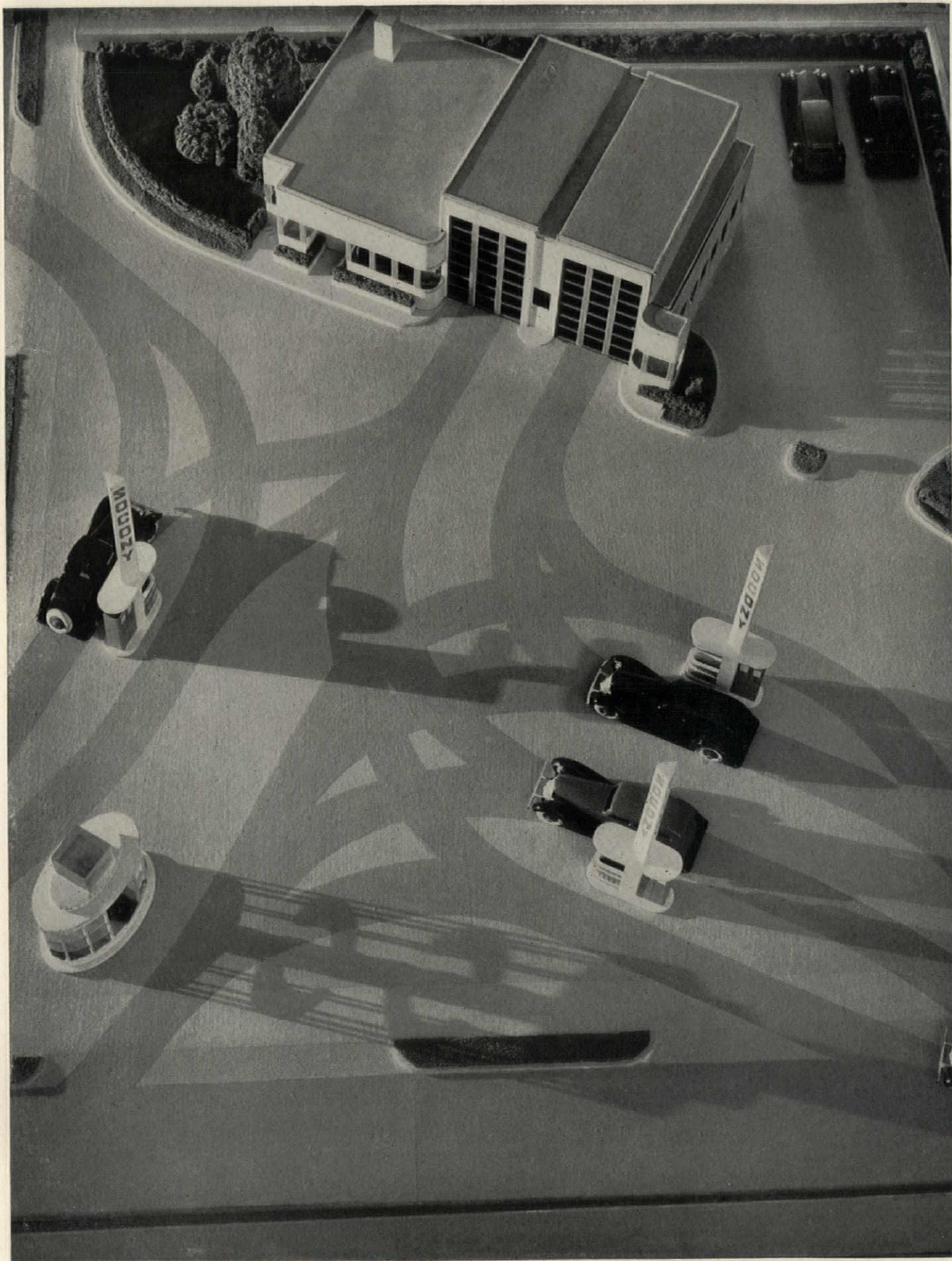
**15** PROPOSED PREFABRICATED METHOD OF BUILDING OFFERS GREAT ADVANTAGES IN SIMPLICITY OF ERECTION AND SALVAGEABILITY



**24** PREFABRICATED CONSTRUCTION WOULD INAUGURATE A PROGRESSIVE PROGRAM OF IMPORTANT COLLATERAL SAVINGS

FOUR MORE of the twenty-four Socony charts prepared by Mr. Geddes show that the approach to the problem was economic as well as architectural. The typical plan was clearly based on a functional analysis and the argument for using a light prefabricated construction would not likely admit of opposition by a group of business men. The view of the model on the opposite page shows lines or paths of contrasting colored paving running from the points where the customer's car enters the yard, indicating logical routes to the pumps, to the lubrication space, and to the exits. The virtue of placing the pumps diagonally as well as the building itself is clearly evident when this circulation is considered. Note that from every pump there is a clear view of the lubrication space and other service features including the women's rest room entrance

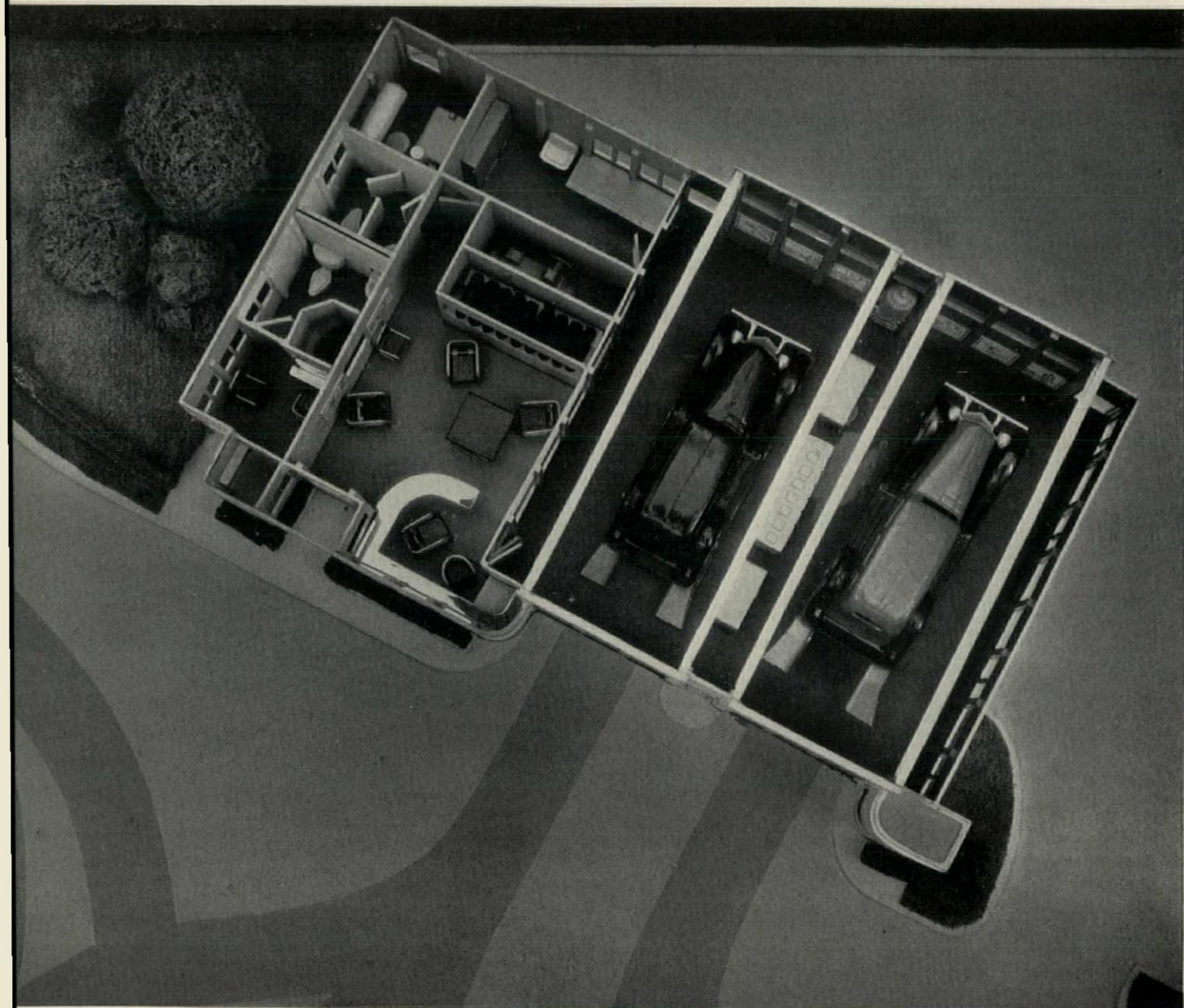




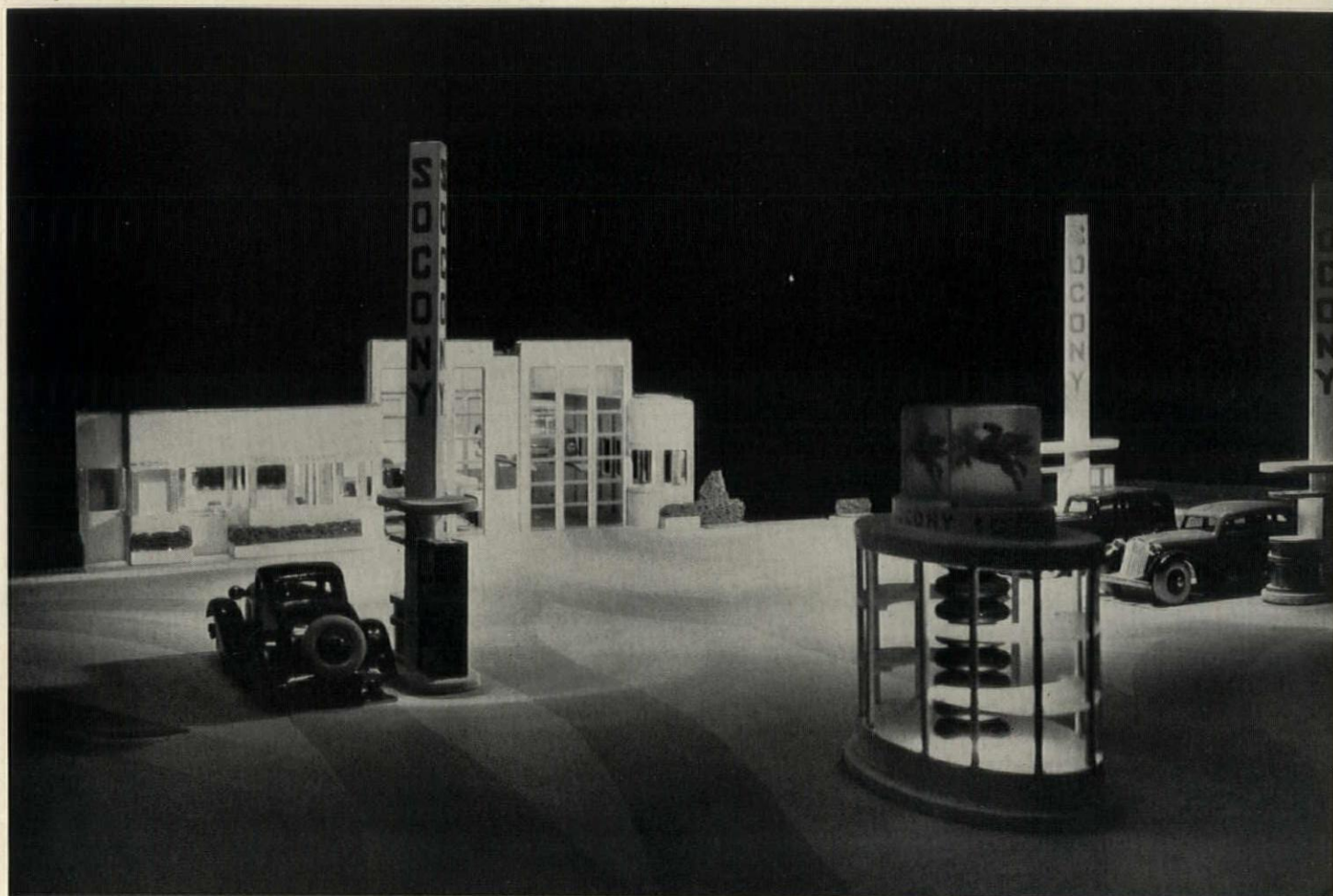
*A view looking down on model of Norman Bel Geddes' design for a Socony Service Station on a corner lot*



THE SERVICE STATION model with its roof removed gives a clear picture of its inner arrangements. The central point of the station is the office space from which all points in the yard, the lubrication space, the rest room entrances, and the waiting room are visible. The attendant on duty there may thus promptly know where he is needed. The lubrication space connects with the office, working space, and storage spaces. The lubrication area was made the dominant feature of the plan because of the fundamental goal of promoting lubrication sales by every means. Selective display space was planned along the path of the prospective customer, whether he be at the pump in his car, in the waiting room, in the "lubritorium," or merely walking by on the sidewalk. Another evidence of Mr. Geddes' thoroughness in presenting his ideas completely and dramatically is to be seen in the arrangement of the model for the study of night lighting effects







profession. It was a natural challenge to Geddes who had always been intensely attracted to anything involving the reduction of complexity to simplicity and order.

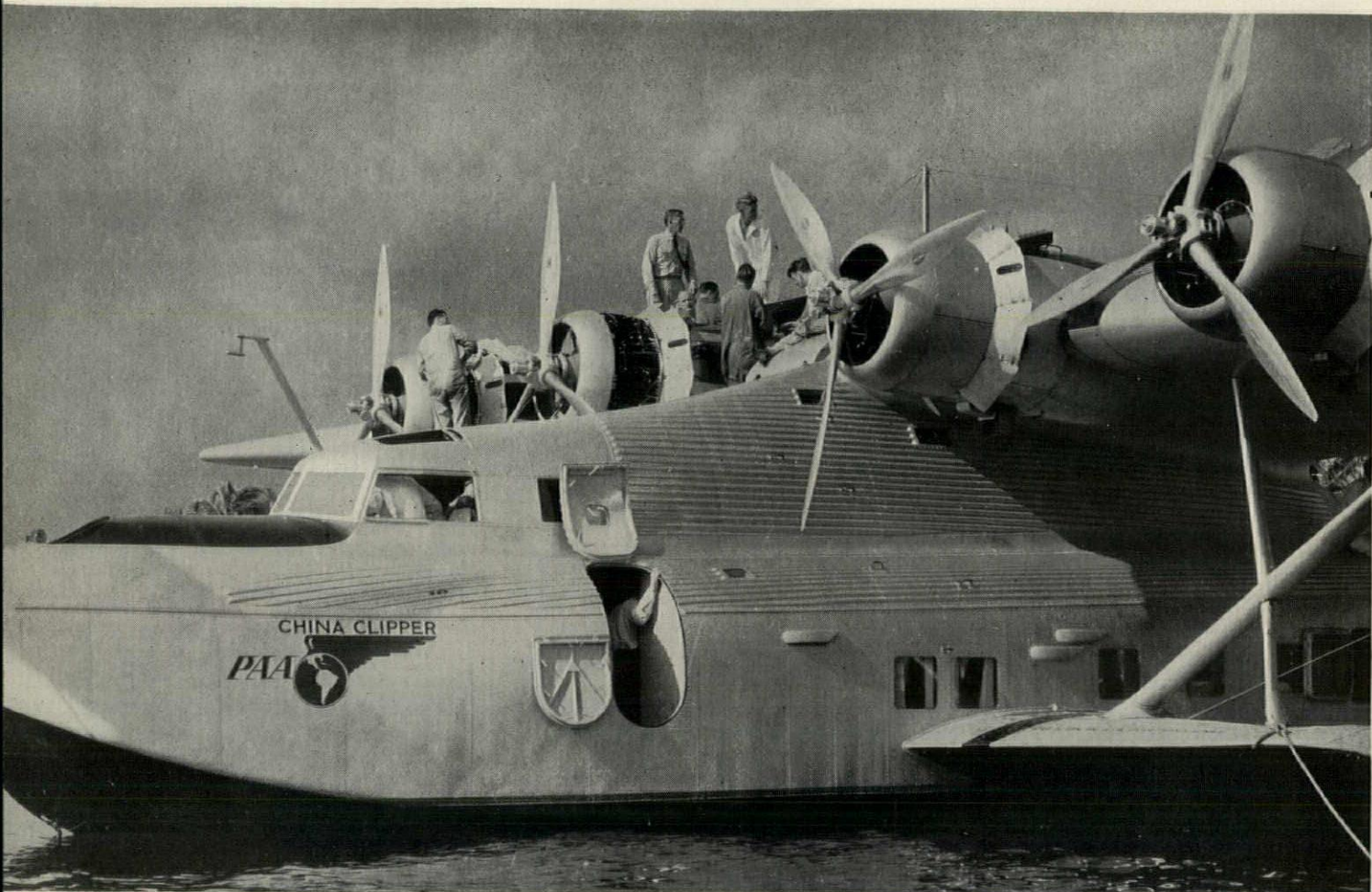
From the theatre he had learned the vital necessity of well integrated organization and had also learned how to build such an organization and make it work. He speedily gathered around him a carefully selected staff (entirely separate from the group working with him on theatre problems) composed of young, talented, well trained designers, draftsmen, and technicians. None were over thirty-five years of age and the majority were much younger, since Geddes wanted individuals with a fresh point of view, not wedded strongly to traditional ideas. He had a chance to pick from among the best young graduates of architectural and engineering schools, because the magic of his name and reputation made the jobs attractive to youth in search of a career. Incidentally, the force that he has had during the years since 1927 has fluctuated in numbers between fifteen and seventy staff members, depending upon the volume of industrial design work in hand. The young men and women found that experience in his shop

opened the door to good opportunities elsewhere when it became necessary for him to let them go. They like him and he likes them. Two of his leading competitors in the industrial field are products of his own and in the theatre the better half of the young generation of designers started in his shop.

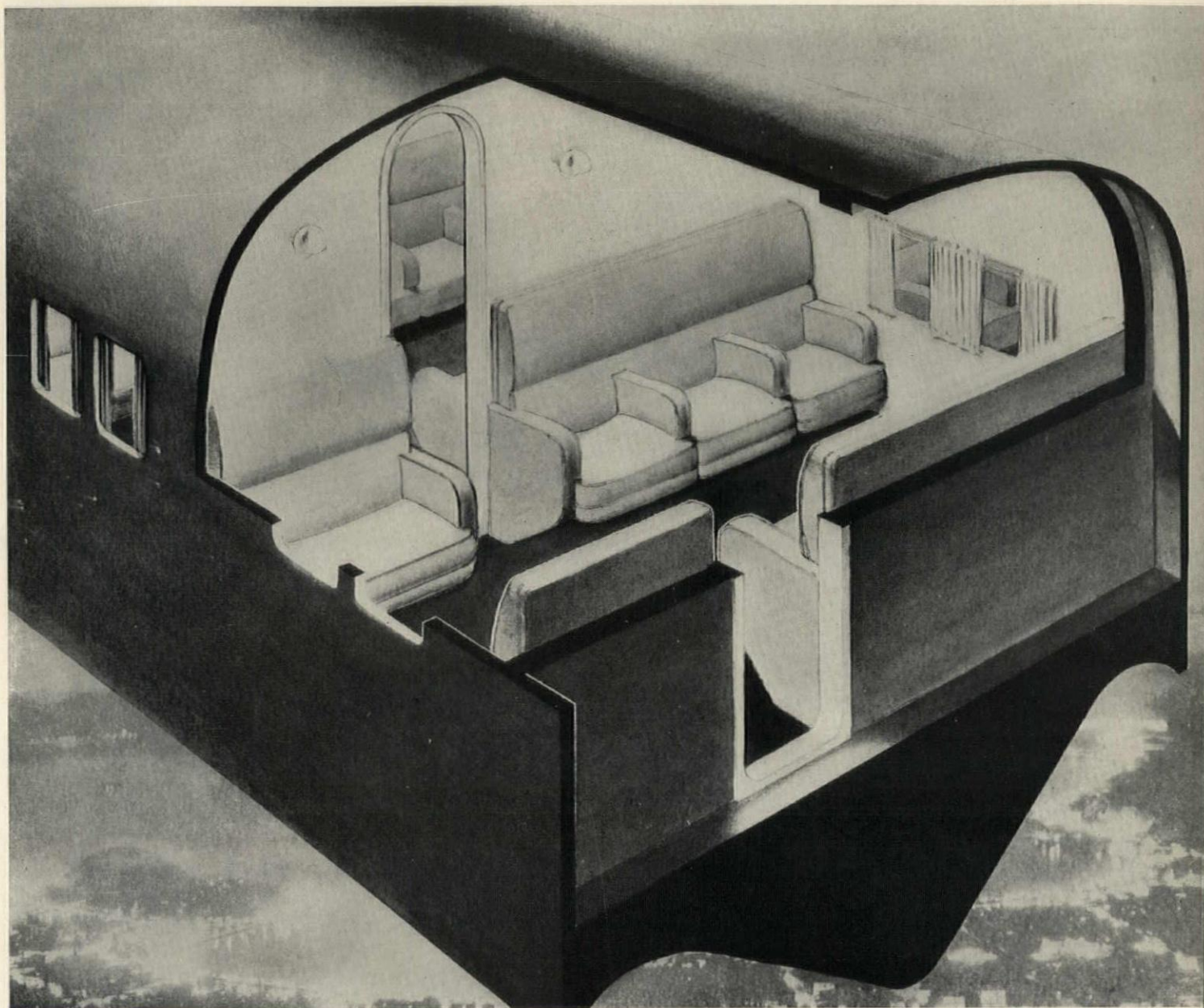
His establishment already included a drafting and design room, a well equipped model shop, and even a small printing plant, for he had long made printing a hobby and liked to control the design and quality of every piece of printed matter that went out of his office. The equipment he had sufficed to begin his new venture with, but of course was added to and extended as need arose.

The work was as highly systemized as that of a modern manufacturing plant, everything conforming to a daily schedule worked out in advance and lived up to religiously. He developed a unique control board on which, spread over an area of some forty square feet, could be seen instantly what each member of his organization, himself included, should be doing on any day for three months ahead. He built up a technical file capable of giving him or his assistants immediate access to the most









WHEN HE UNDERTOOK the design of interiors and equipment for the China Clipper of the Pan American Airways Pacific Service in 1934, Geddes was allowed only eight pounds per passenger with which to provide daytime accommodations for 52 (including 6 crew), sleeping accommodations for 18, and two complete lavatories. Naturally, everything was designed for light construction and for quick convertibility from day to night use. A unique and efficient ventilation system provides conditioned air for seats which become beds larger than pullman berths, while the Lounge table converts to four wash basins with hot and cold running water. The covers of walls, ceiling, and furniture, made of light fabric, are completely removable by means of zippers and Dzus fasteners, permitting them to be cleaned easily after each trip. The Galley is the first real kitchen on any airplane, with electric range, refrigerator, built-in shock-absorbing wine closet, etc. It provides full-course hot meals and serves as refreshment bar. For the floors was used brown waxed flaked cork, which is easy to clean and aids soundproofing. The walls and ceiling are of a light, warm gray, cotton wing fabric, pigmented with acetate wing dope. The furniture covering is a diagonal weave brown mohair with white piping, while the night curtains are of cream-colored crash with a brown plaid pattern. The general effect is surprisingly and pleasantly colorful.





A SCENE FROM Dante's "Divine Comedy" designed by Mr. Geddes in 1920. The stage is circular, rising in a series of broken terraces, flanked by four huge towers of irregular shape, and with a central descending pit. By carefully arranged lighting, whole sections of the stage may be blotted out or thrown into fantastic relief, so that a constantly moving variety of form and effect is obtained throughout the performance, eliminating the need of ordinary scenery. During the action of the Inferno, the lighting comes from the pit. During Purgatory, it comes from behind, shooting heavenward like a display of the aurora; and during Paradise the lighting takes on a greater and greater diffusion, beginning from above and spreading until finally, as Dante exclaims, "O abundant Grace, by the Eternal Light, let my sight be consumed!", it is turned directly into the audience with blinding intensity.

ON THE FACING PAGE is a scene from "Dead End," Sidney Kingsley's play, designed and produced by Mr. Geddes in October, 1935, and still running in New York, with a duplicate company in Philadelphia. This superbly realistic setting of a dead-end street terminates in a dingy wharf from which the young hoodlums of the neighborhood dive and on which they develop their lives. Flanked by dismal tenements and by a palatial New York apartment, this dead-end street is a symbol of the utter hopelessness of the desperately poor. The setting itself is helpful both to the writing of the playwright and to the acting of the cast. But effective as the setting and acting are, they need the realistic sound effects, introduced by Mr. Geddes, which give the impression of lapping water, the hum of waterfront and street traffic up the block, to greatly heighten the verity of the whole. These two designs afford a sharp contrast.





authoritative and up to date information obtainable on any subject pertinent to industrial design. Over a period of years he had assembled a complete working library and subscribed to over a hundred domestic and foreign periodicals dealing with technical subjects. As fast as they appeared these were apportioned among different staff members for study and digest. He himself scanned them all with special attention to items marked for him as containing important news about materials and processes.

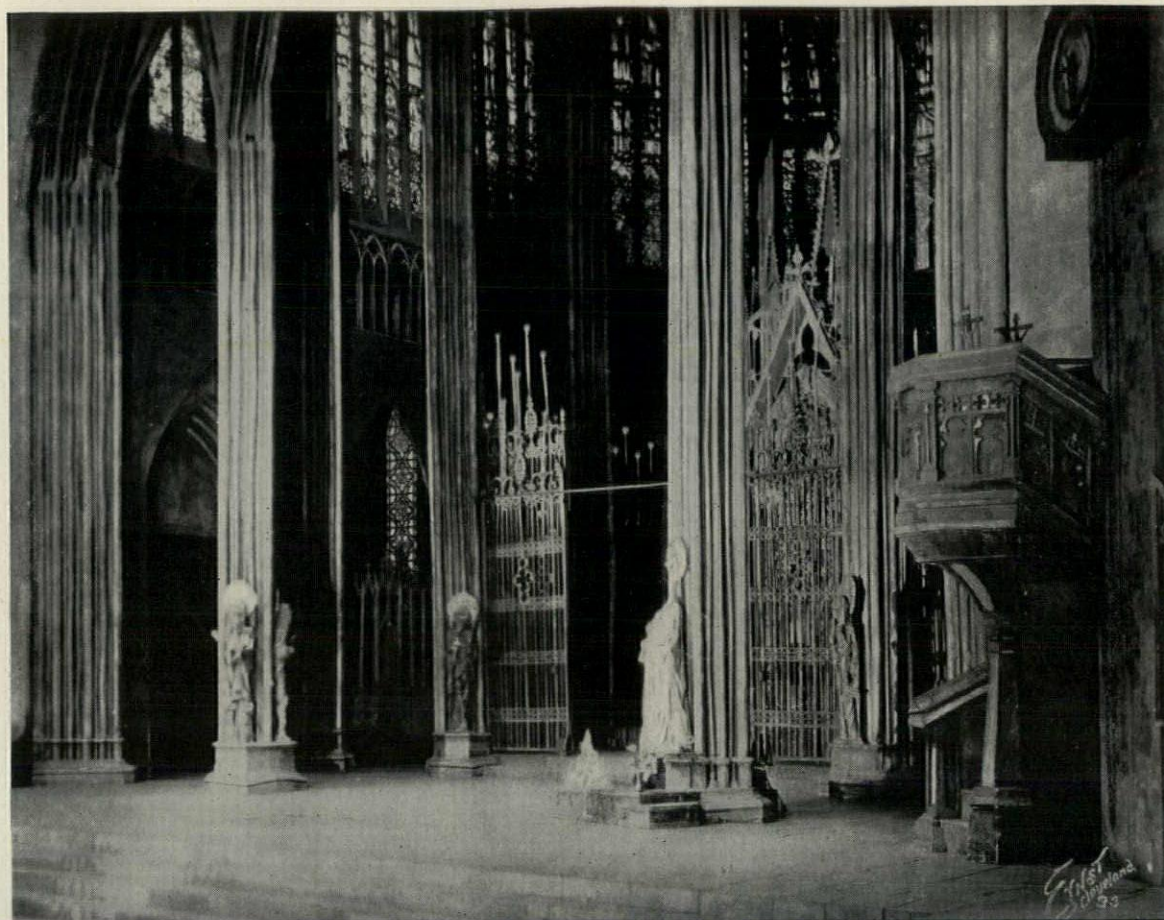
His first industrial job was, of course, from the client who had started him off in this new field—his friend, the late Ray Graham, of the Graham-Paige Company—for whom he designed a series of motor car bodies which were, however, never adapted. This job was quickly followed by others. Most clients came to him.

Others he sought out, armed with ideas for the improvement of their products. All of his clients were leaders in their respective specialties. Although he never had, or wanted, more than a half dozen clients at one time his shop hummed with activity. His organization expanded.

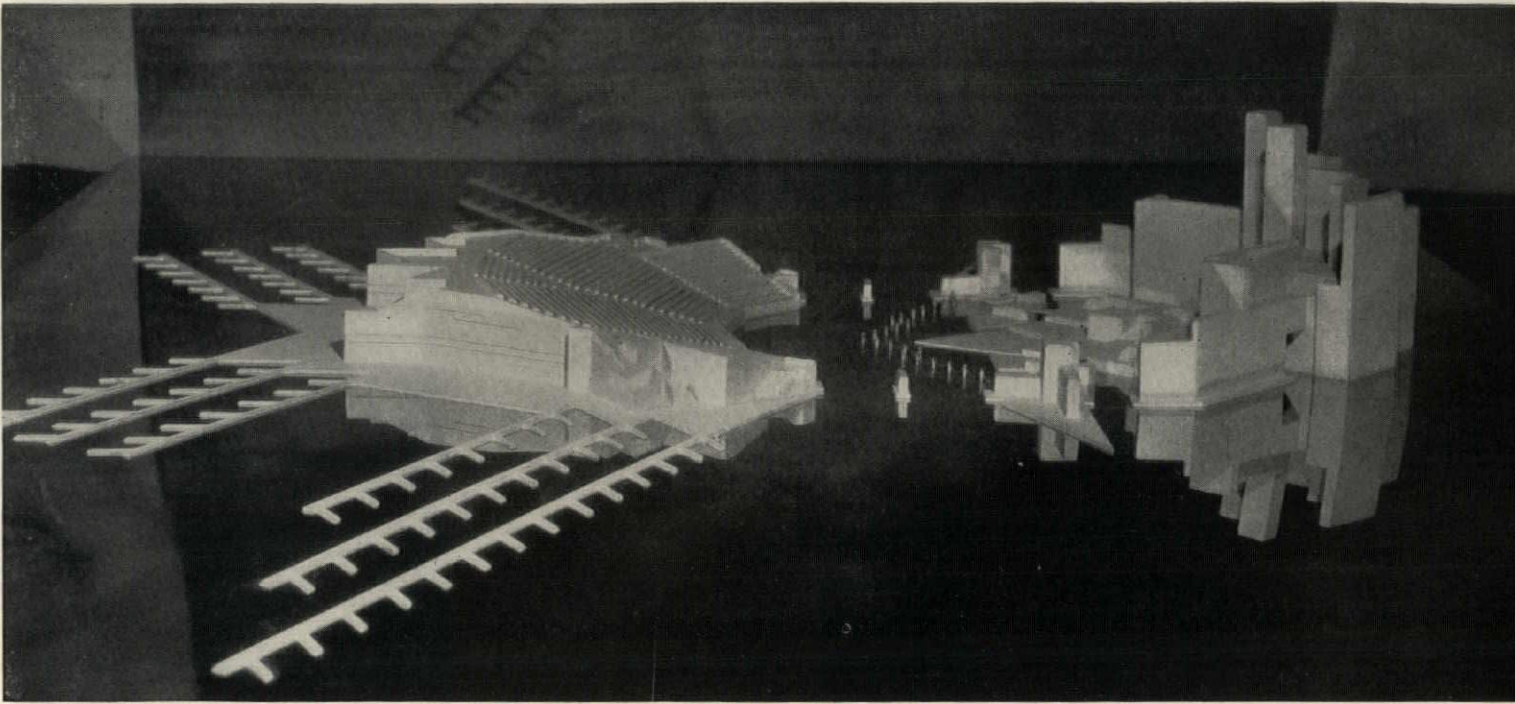
His method of carrying on the work is described in some detail in his book, "Horizons," published in 1932. At the beginning of a new problem he gathers together specialized members of his staff whose abilities apply to it. Sometimes he brings in from outside special consultants, and the whole thing is discussed generally in all its phases. At that time the specific objectives and the means of achieving those objectives are determined and agreed upon and a time and budget schedule is



Two views of Mr. Geddes' setting for "The Miracle," as staged by Max Reinhardt in 1924 for Morris Gest at the Century Theater

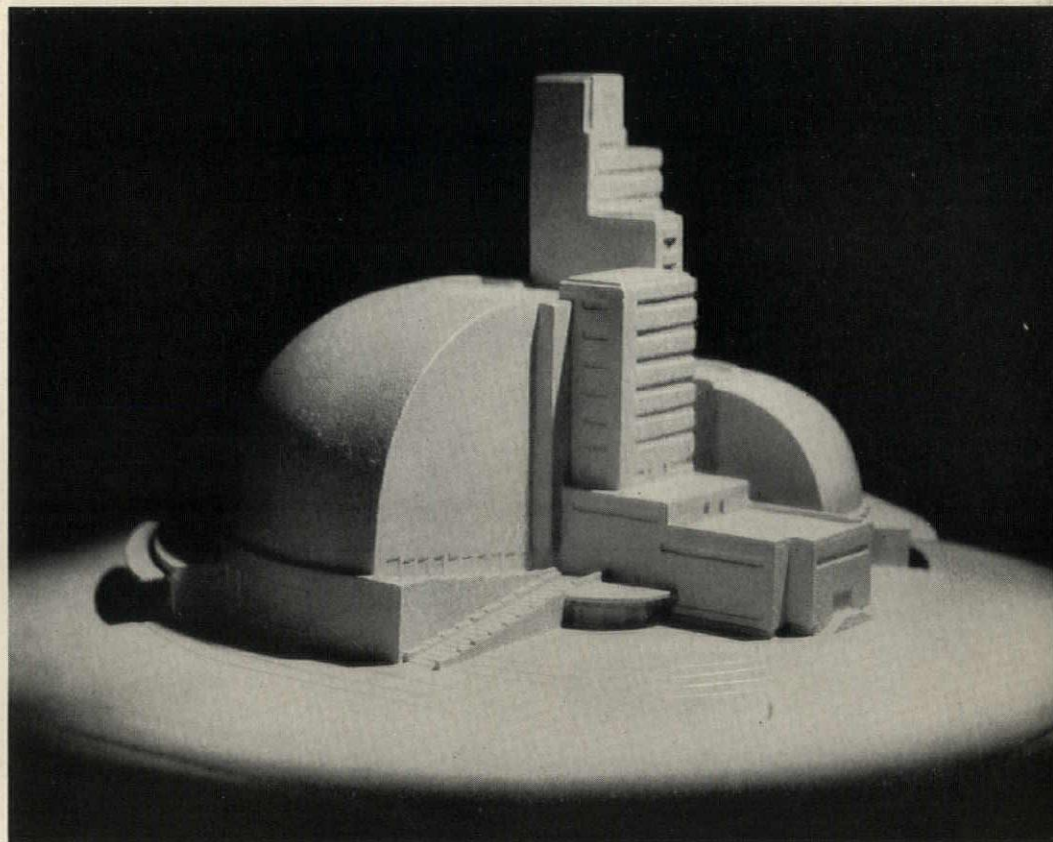




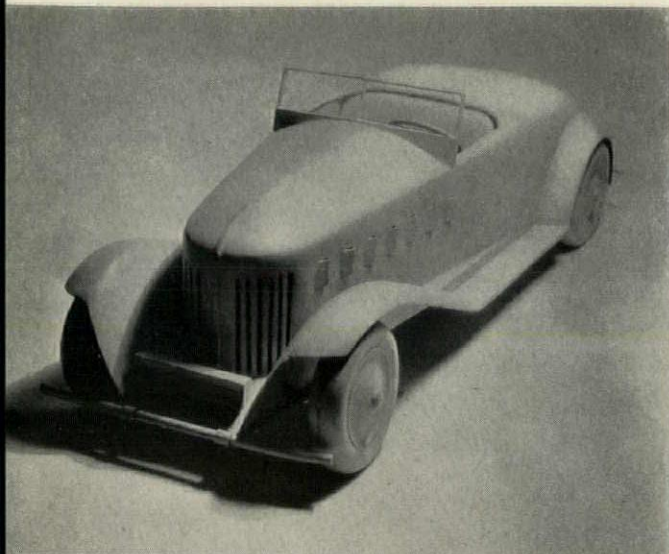


ON THIS PAGE are shown views of the models of two projects developed by Mr. Geddes in 1929 when he was acting as consultant to the Architectural Commission of the Chicago World's Fair. The first is his Water Pageant Theatre designed as a setting for spectacular performances in novel surroundings on a lake. The auditorium, at the left, separated from the stage by a canal, was arranged to seat two thousand people and was to be provided with radiating piers and landing docks for canoes and small boats. The whole conception was highly imaginative yet practical and appropriate for such a festive occasion as a fair. Below is Geddes' scheme for a Dramatic Center for the fair, including in one structure a large theatre to seat 1700, a small theatre to seat 500, a children's theatre to seat 260, a cabaret and roof garden with capacity for 250 guests, and all the necessary auxiliary service spaces

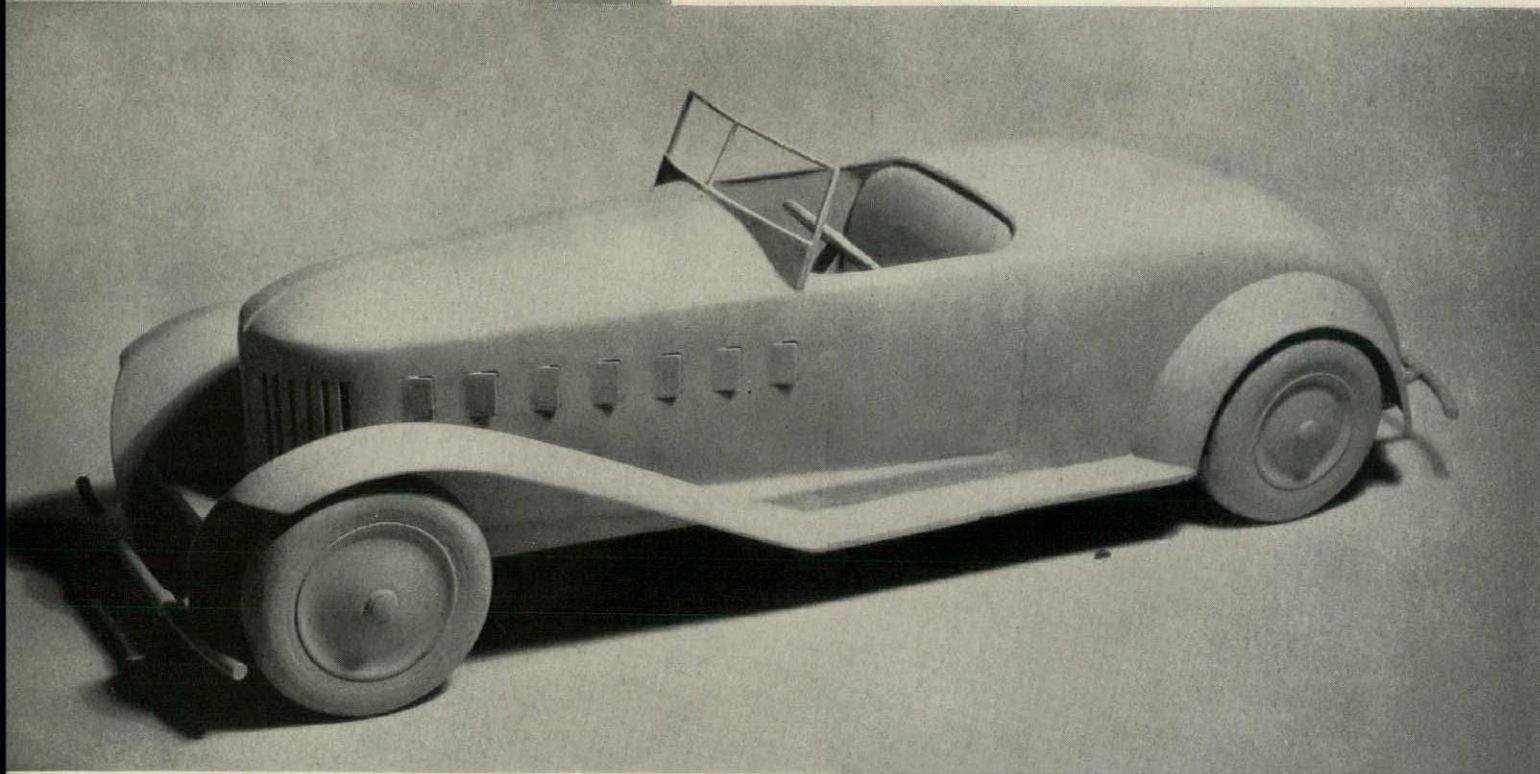
"THE MIRACLE," two views of which are shown opposite, was a truly ambitious undertaking carried through with the passion for completeness in every detail which is characteristic of Geddes. The entire theatre interior, auditorium as well as stage, was built over with solid and substantial materials into a convincing semblance of a gothic cathedral. Unfortunately, perhaps, the success of this production led to the redecoration of moving picture houses all over the country into Chinese pagodas, Egyptian temples, Spanish court-yards, and what-not until the public yawned



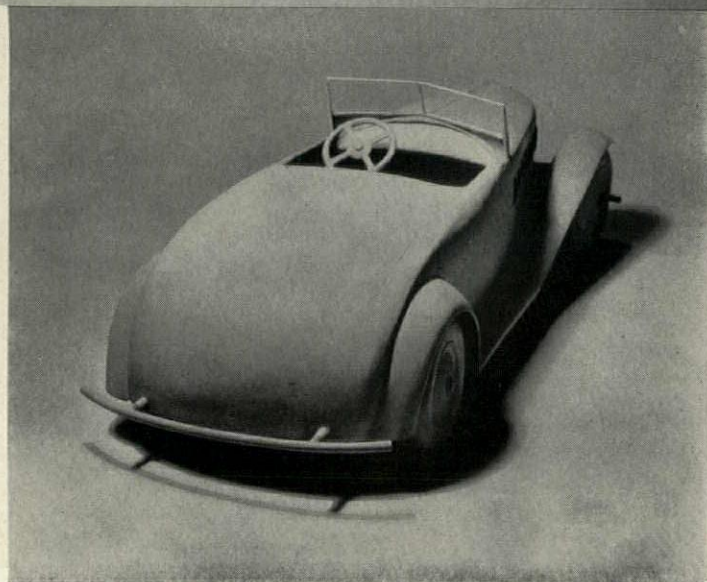




ONE OF GEDDES' earliest ventures into industrial design was this motor car, done for the Graham-Paige Company in 1928 to meet their demand for a car that would be in style five years from that time. Upon its acceptance and from it were to be designed four other models, each of them to step back 20 per cent. toward the 1928 car so that the changed style could be achieved gradually with the die cost distributed over five years. The question was: "Would this really be in style in 1933?" The Graham-

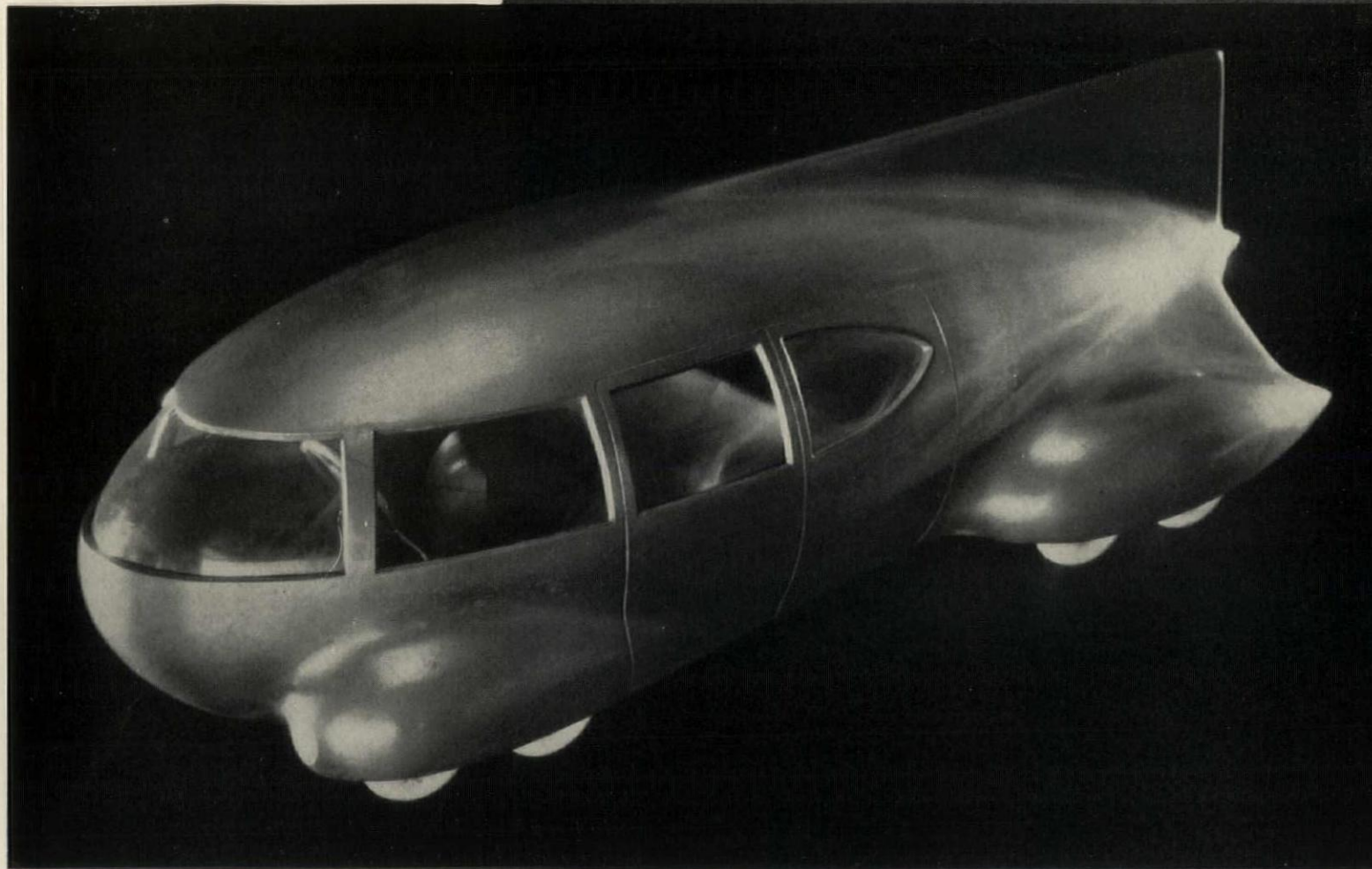
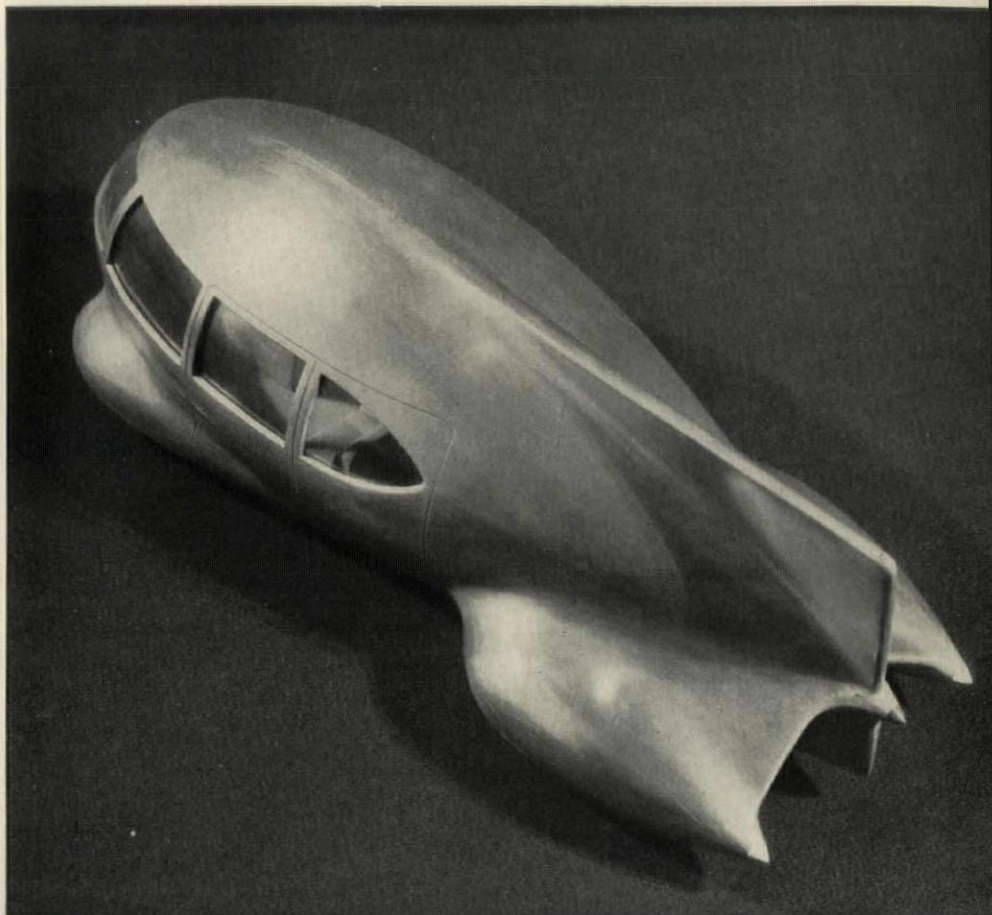


Paige people decided not. It strikes us that except for its extreme simplicity and lack of fairing of the front fenders, this model so much resembles present cars that it would attract little attention if driven on the streets today. This car possesses many innovations which are now considered commonplace; a rounded front, a top which folded down into the body, a built-in fuel tank and trunk compartment, a freedom from unnecessary mouldings, and provision for front lamps to be set low and between mudguards

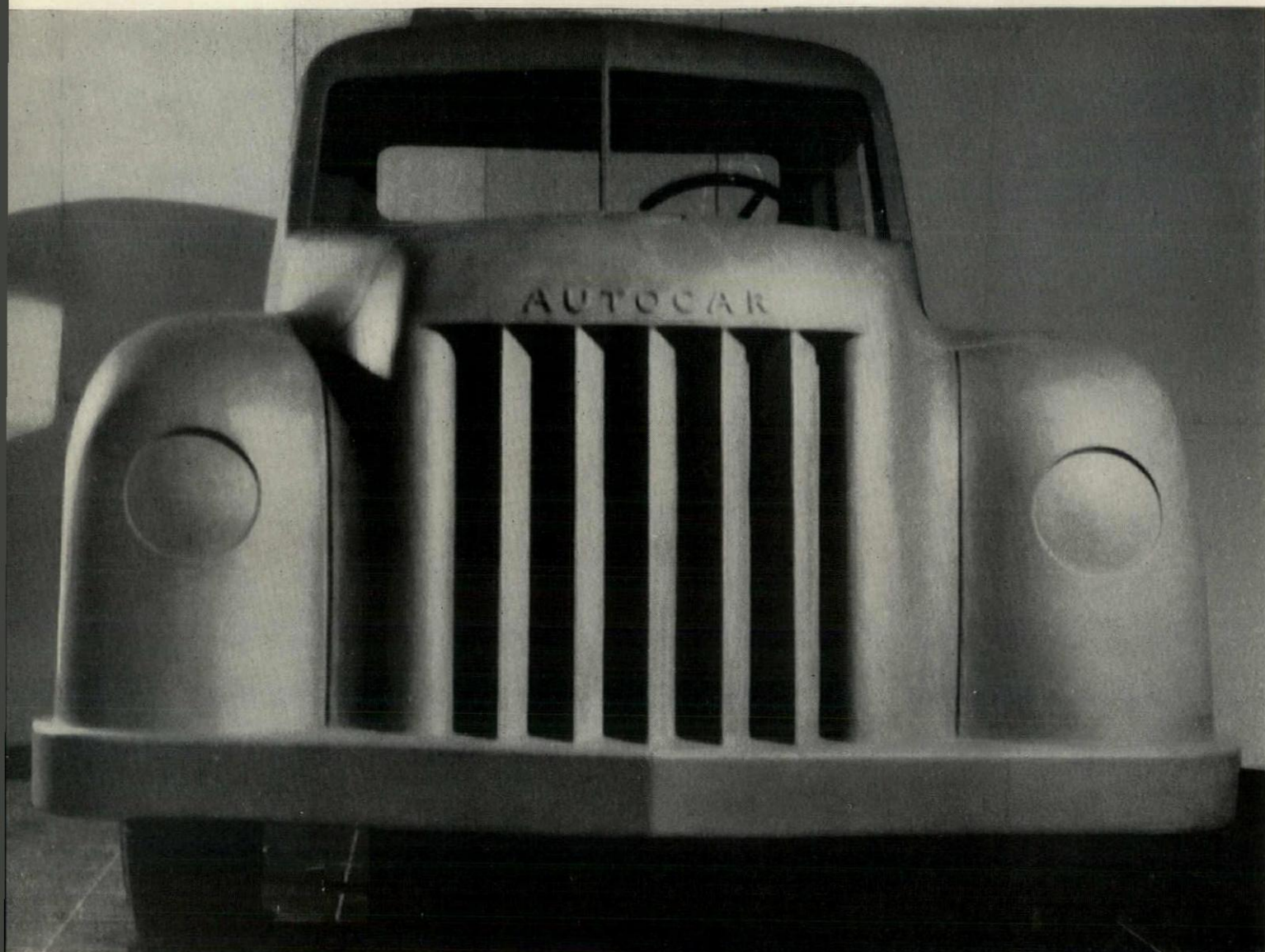




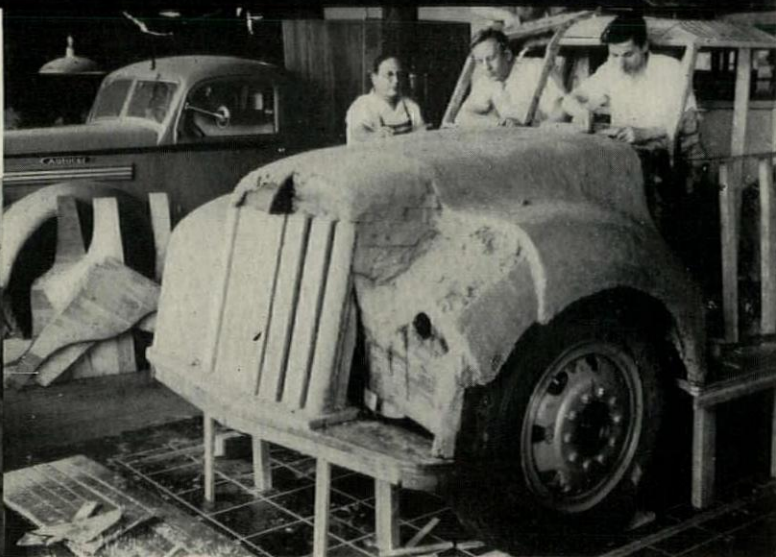
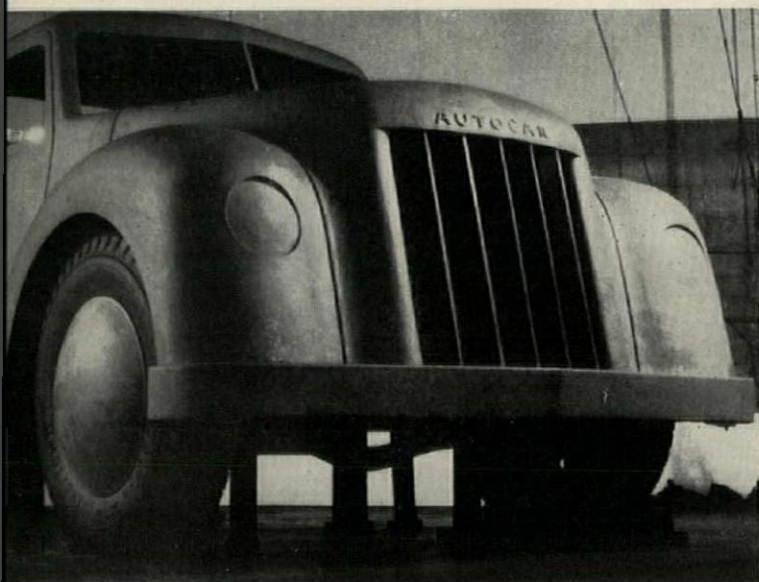
CONTRASTING WITH the more conventional looking car shown opposite, this model by Geddes of a completely streamlined sedan looks to the future. A car such as this would have a much more roomy and comfortably arranged interior, a much greater range of clear vision for the driver, a tremendously reduced weight with consequent economy as compared with the cars of today. Unusual mechanical arrangements called for by this design include a Diesel-electric power plant located in the rear. Each of the eight independently sprung wheels may be turned 90 degrees and is to be driven by a self-contained electric motor taking current from the generator and providing eight distinct points of power application and braking







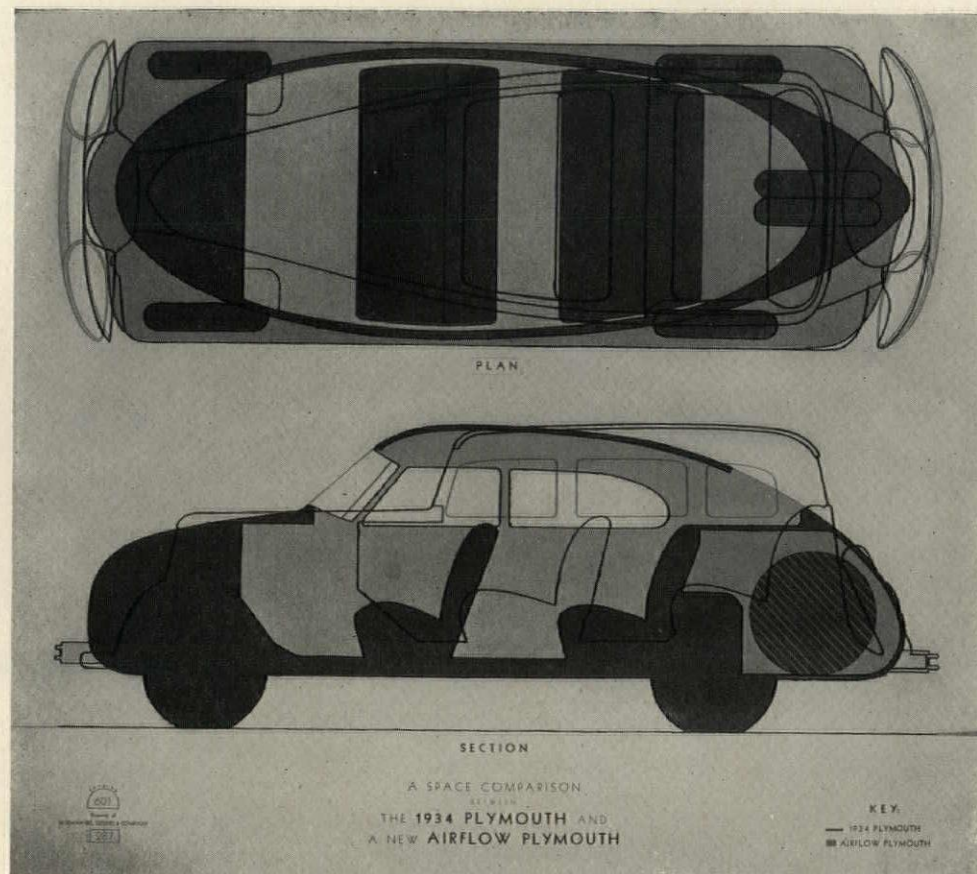
TO OVERCOME the competitive inroads made on their business by a rival concern with a heavier appearing truck, Autocar asked Geddes, in 1935, for a new design for the front end of their conventional



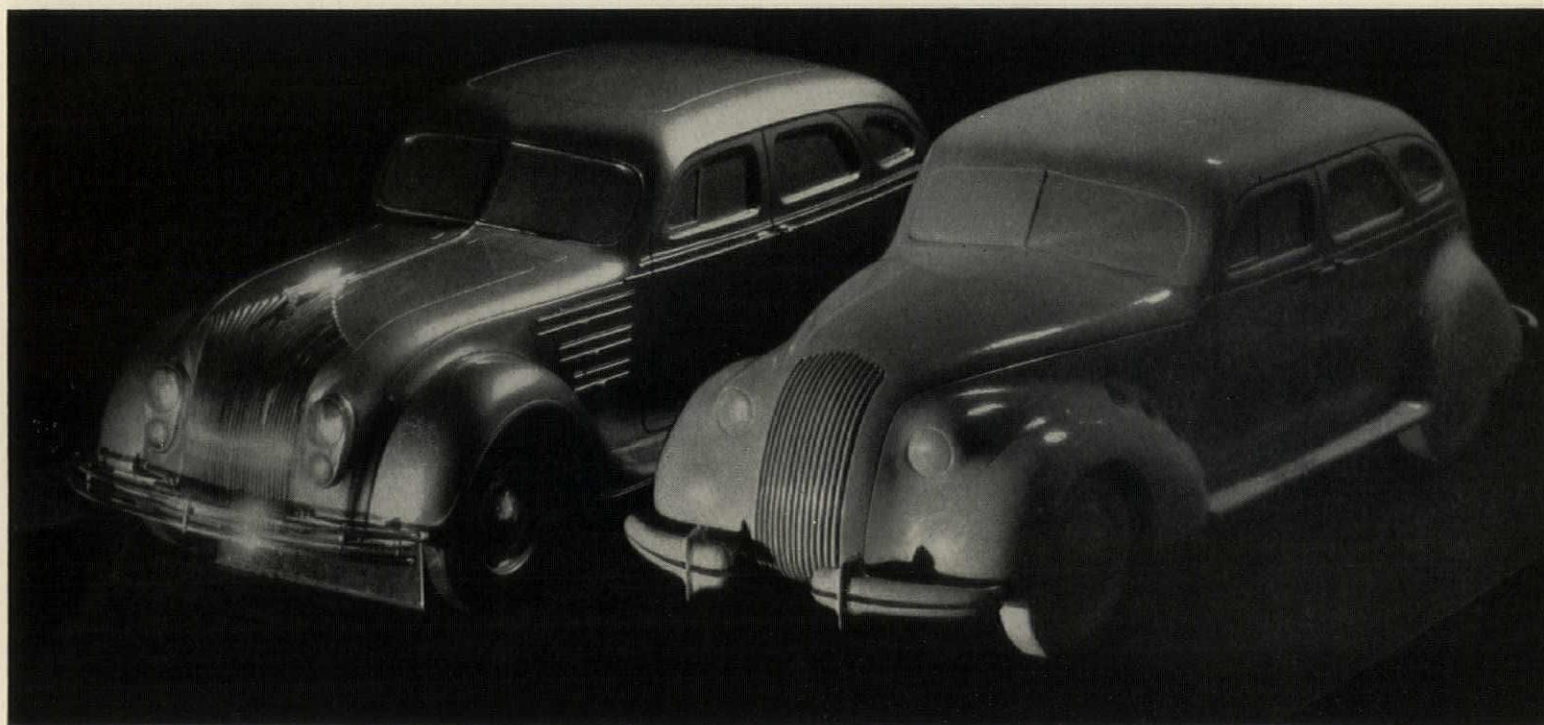
model—one that would express the extreme of power and strength. Working from rough sketch to scale model to full size model, Geddes produced this serenely powerful looking prow to dominate the road—and, we could easily believe, the truck market



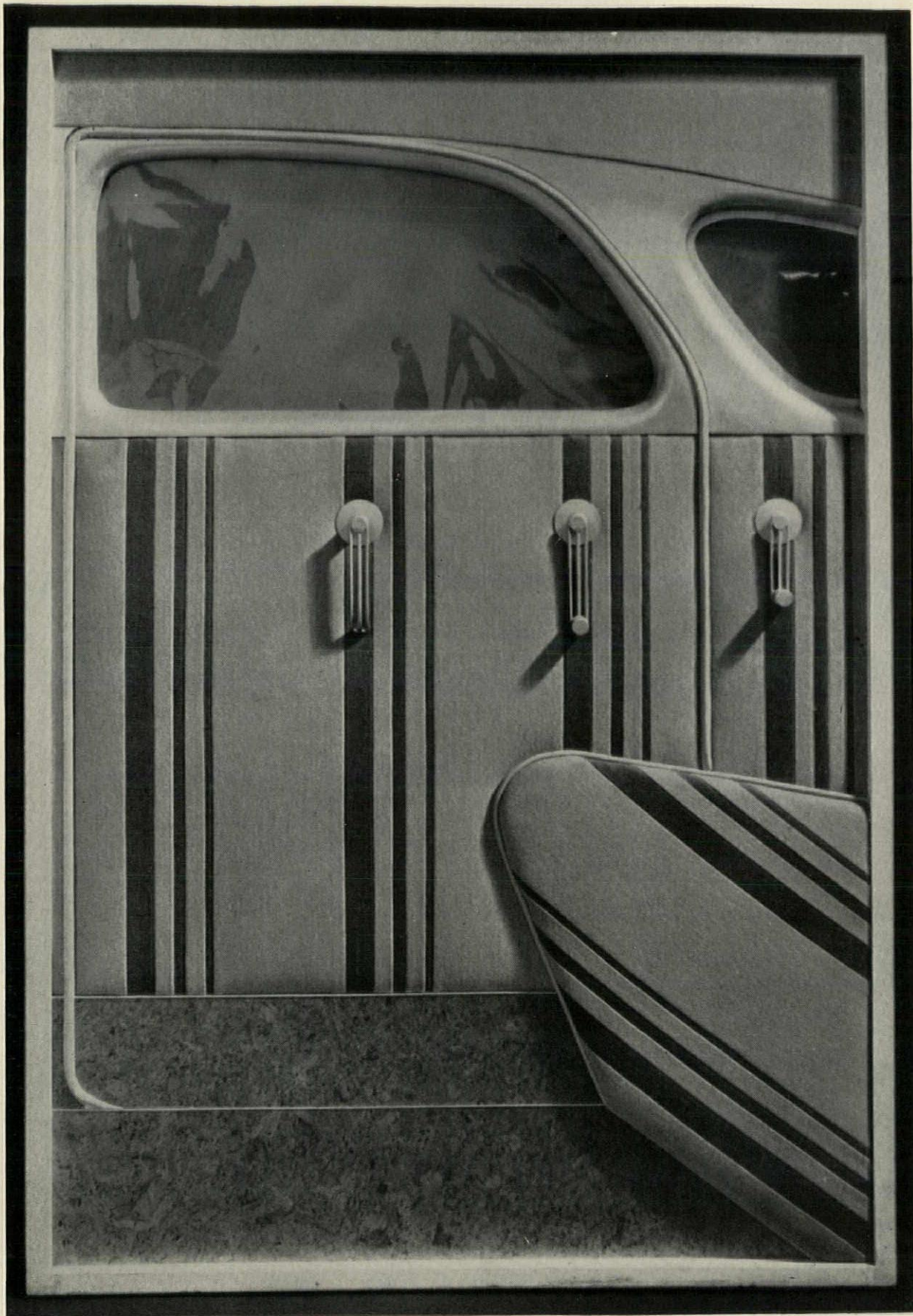
TO SHOW graphically a comparison between his suggested design for an improved Plymouth and the regular 1934 model, Geddes prepared this diagram. The advantages of the new design in respect to improved vision, greater headroom, more capacious seats, and improved riding comfort are at once evident. For a front-engined car this design approaches the maximum of perfection possible (1934)



DIES FOR THE FIRST Airflow had already been completed when Geddes was brought into the Chrysler design picture. Public reaction had by then indicated a resistance to the novel frontal design. His job was to redesign the car, maintaining or improving its streamline characteristics, at the same time making it more attractive. Had the Geddes design been used originally, we have a feeling that it would have been received with enthusiasm. Note the arrangement whereby the slipstream, passing the ports in the fender, draws the heated air out from the engine space

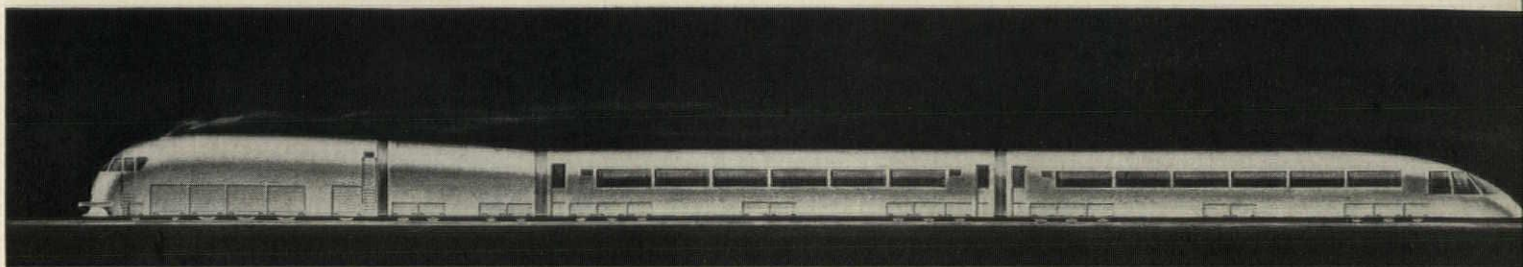






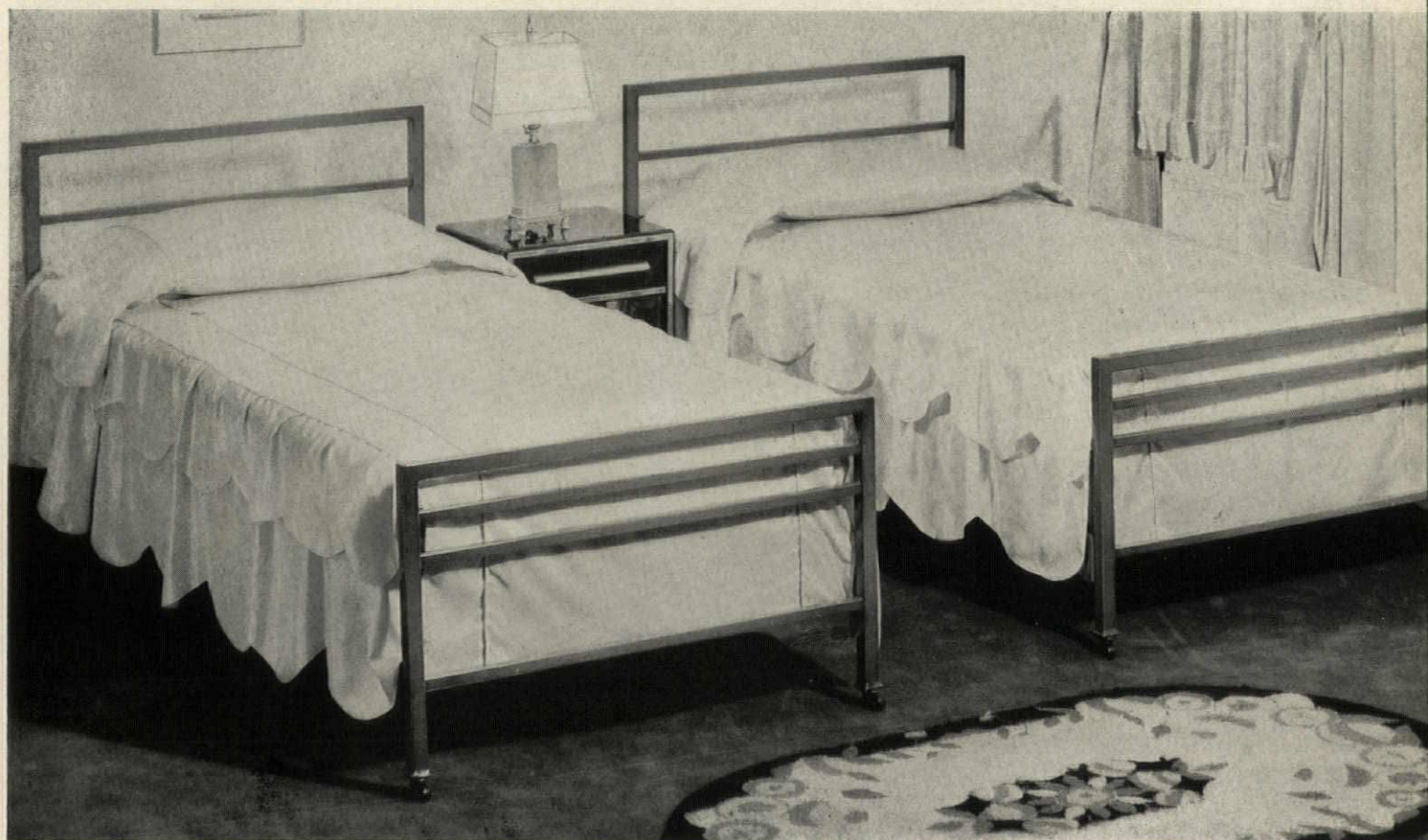
*THIS is the Geddes substitute for a "rendering," a semi-flat model constructed in one-inch relief of actual materials to be used. This full-sized model shows the client the exact interior appearance of his motor car in actual materials, color, proportion. The dull aluminum of the plain moldings around the windows is repeated in the door fixtures at the joint of upholstery and floor. Gray whipcord striped in blue formed the upholstery*



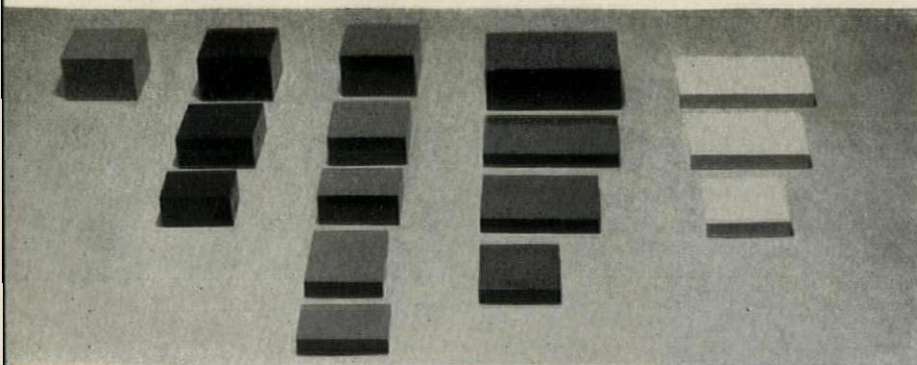


*MOST OF GEDDES' forward looking designs for improved, streamlined, land, water, and air vehicles were covered with patents wherever possible. This streamlined steam train, however, was not so protected since his patent attorneys considered the railroads too conservative to adopt any of the ideas. Surprisingly enough, it was the railroads that were the first to move in this direction and Geddes' train, designed in 1931, became the forerunner of the Union Pacific, Burlington, and other streamline trains designed and produced several years later and now in operation. This train is an excellent example of Geddes' insistence on a search for the form best suited to the solution of a problem, with secondary regard for tradition*

*THE BEDS DESIGNED by Geddes in 1929 for the Simmons Company were so radically simple that they were not included in the line until about four years later. They have been good sellers ever since. He introduced here the policy of not trying to make steel furniture look like wooden furniture either by its form or through surface treatment, taking advantage rather of the peculiar qualities of steel as material*

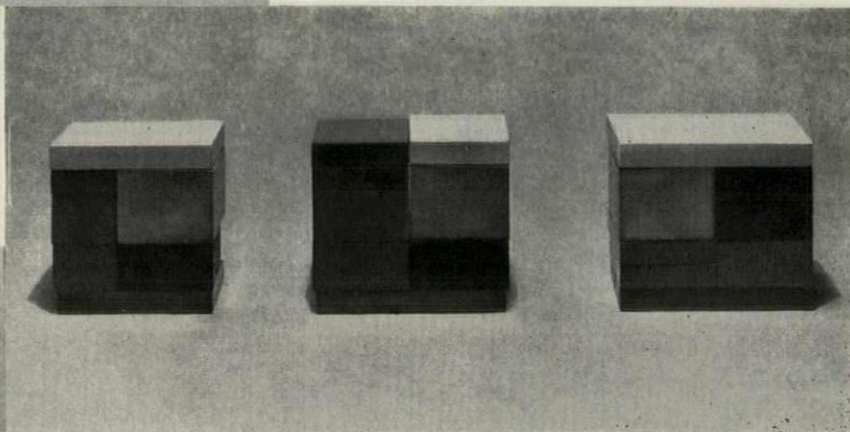






THE BLOCKS at the left represent the sixteen standardized units designed by Geddes in 1932 to replace the several hundred units then being used by Standard Gas Equipment Corporation for its stoves

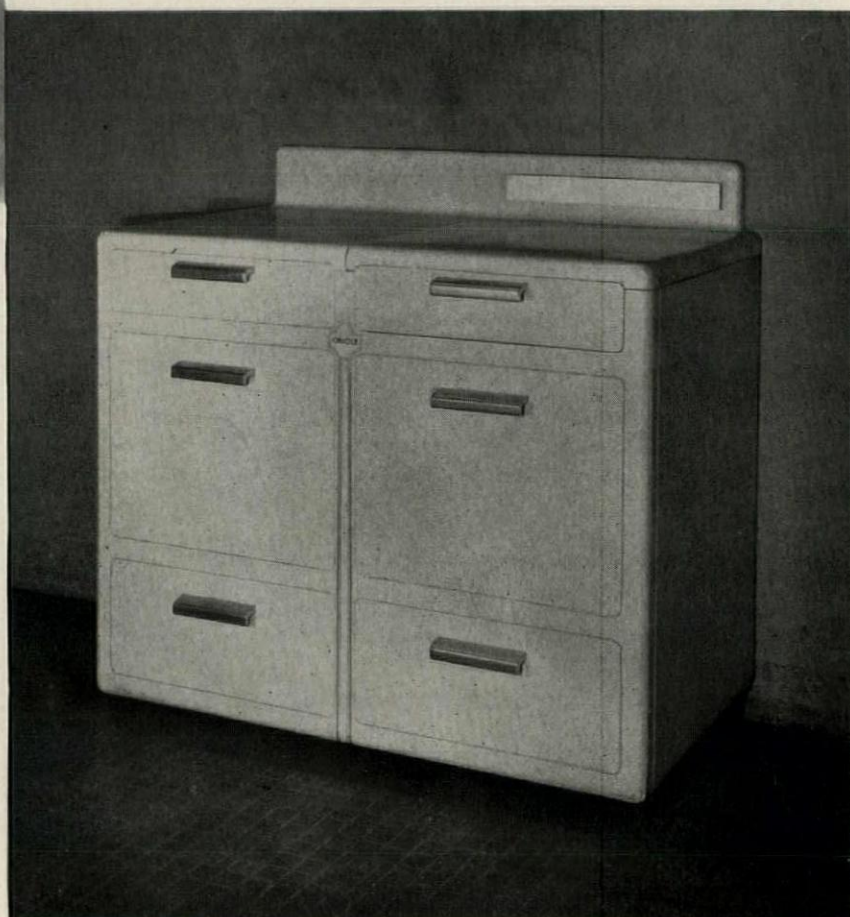
AT THE RIGHT are assemblies of the standard blocks into three of the four stove models found to supply every essential feature of the hundred models previously carried in the line



A VIEW LOOKING DOWN on one of the completed stoves reveals the efficient looking simplicity to which we are now accustomed but which was rare before 1930



ONE OF THE MOST successful of Geddes' designs for mass produced articles, this stove is a plain out-and-out cooking machine with no frills, no gadgets, no decoration to dress it up. Its attractive appearance, its efficient operation and ease to clean, and its economy of manufacture by mass production methods combine to make it almost an ideal example of what a good industrial designer can and does do to improve living standards. This was the first all white stove on the market

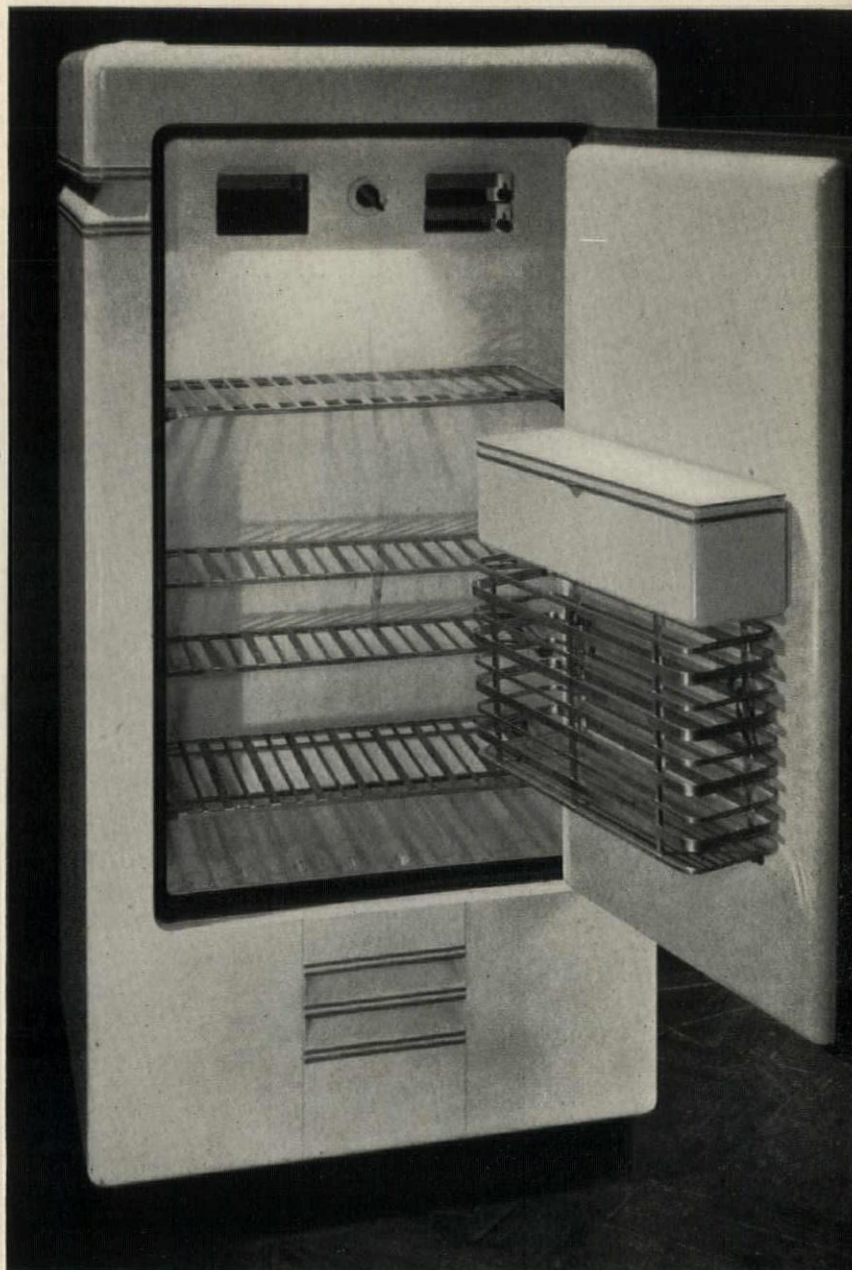




worked out. Then comes a period of research as extensive as the problem requires, during which all facts which have a bearing on the problem are assembled and put in condition for orderly analysis. This information varies with different types of work but usually embraces such subjects as the methods and equipment used by the client in his factory, cost details for the various processes, all data on the materials from which the product is and might be made, a complete survey and comparison between this information and that of competing products and of things which might be used in conjunction with the proposed product. If, for instance, the thing being studied were a gas range, the design characteristics of other kitchen equipment, such as refrigerators, would be pertinent.

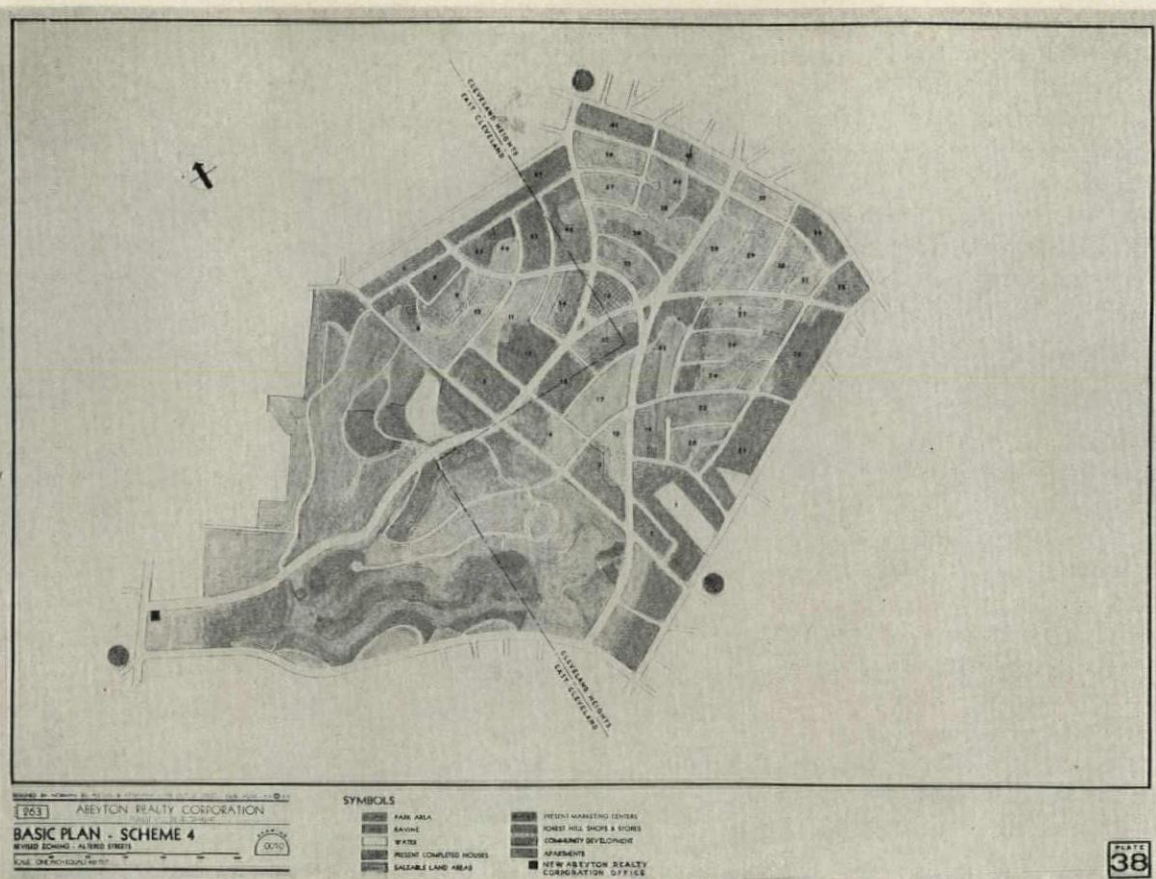
One of the most important groups of data to be secured is that having to do with the reactions of dealers and consumers to similar articles already available to them. This is obtained by direct interview with individuals representing a good cross section of the probable market. All of this information is collected from the point of view of *design for use* as well as for *appearance*.

When all the facts have been brought together they are discussed in conference with the design staff, every member of which must digest the material and get the whole picture clearly in mind before preliminary sketches are started. Here, says Geddes, is the crux of the solution. These talks of his at this point start the group off all from his own viewpoint as a base to which any member has access for further information, and inspiration, at any time. Geddes starts nearly all problems in the same way: by first of all determining what the ultimate result should be, then working backwards from that point to the present. Conflicting ideas on the part of employees are encouraged although often overruled. In any case thinking must precede drawing in Geddes' establishment. There

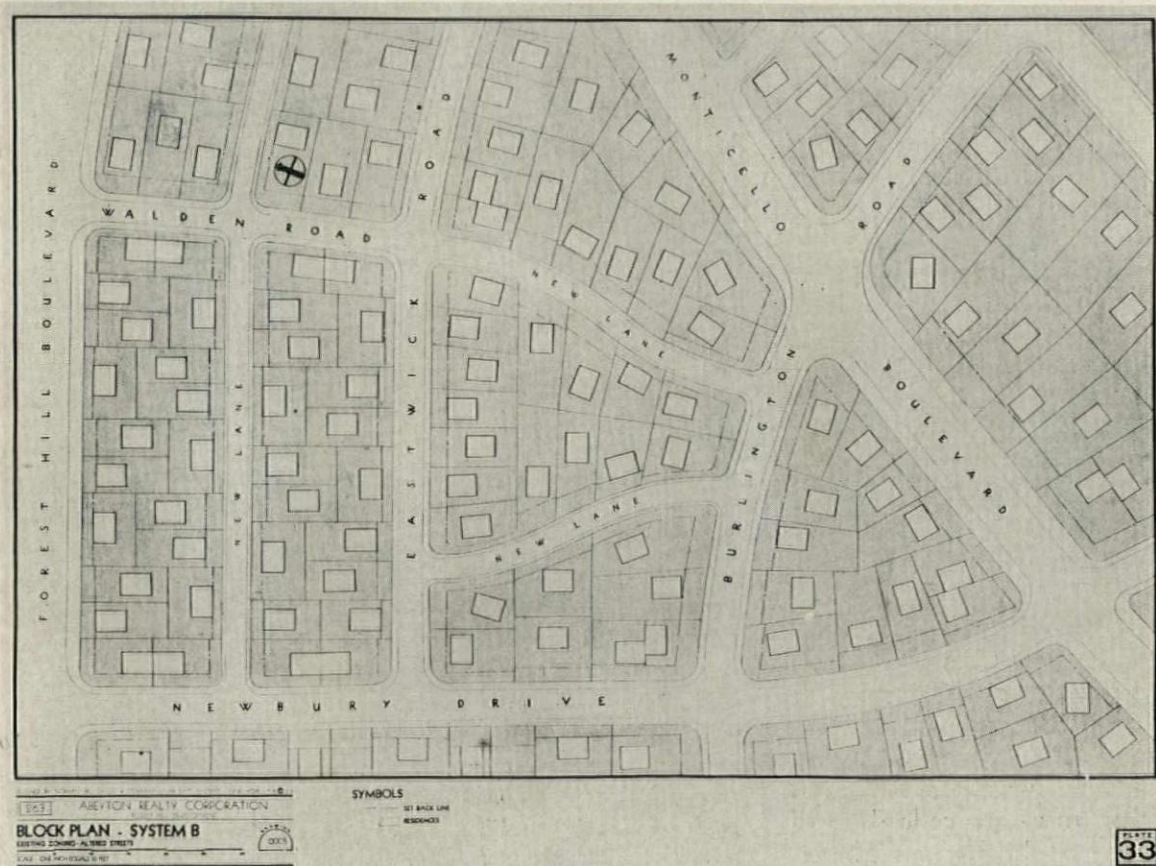


A COMPLETE full-sized model of Geddes' design for an improved Electrolux air-cooled gas refrigerator was built to show the client, Servel, Incorporated, exactly how the finished product would look. It is the result of a concentrated and extensive study of the whole refrigerator problem and everything about it represents a striving toward perfection for use. The beauty resulting from simplicity, good proportions, and fine finish was, of course, consciously attained—but not at the expense of any functional requirement nor by the application of any extraneous ornamentation. The door, carried on concealed hinges, closes flush with the exterior cabinet surface. So viewed, only the necessary louvres at top and bottom and the circular gray and white name plate, which releases the door catch when pushed by hand or elbow, relieve the plainness (yet somehow not severity) of this modern kitchen accessory, designed in 1934

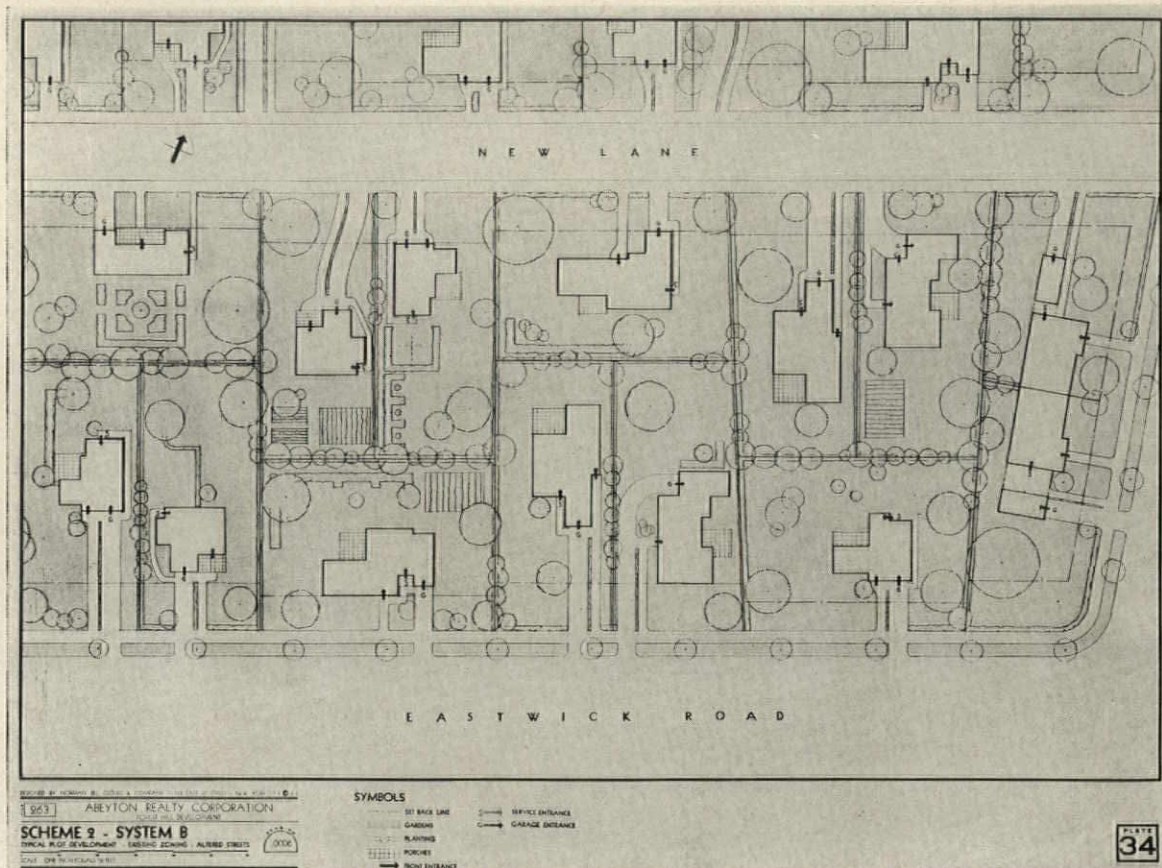




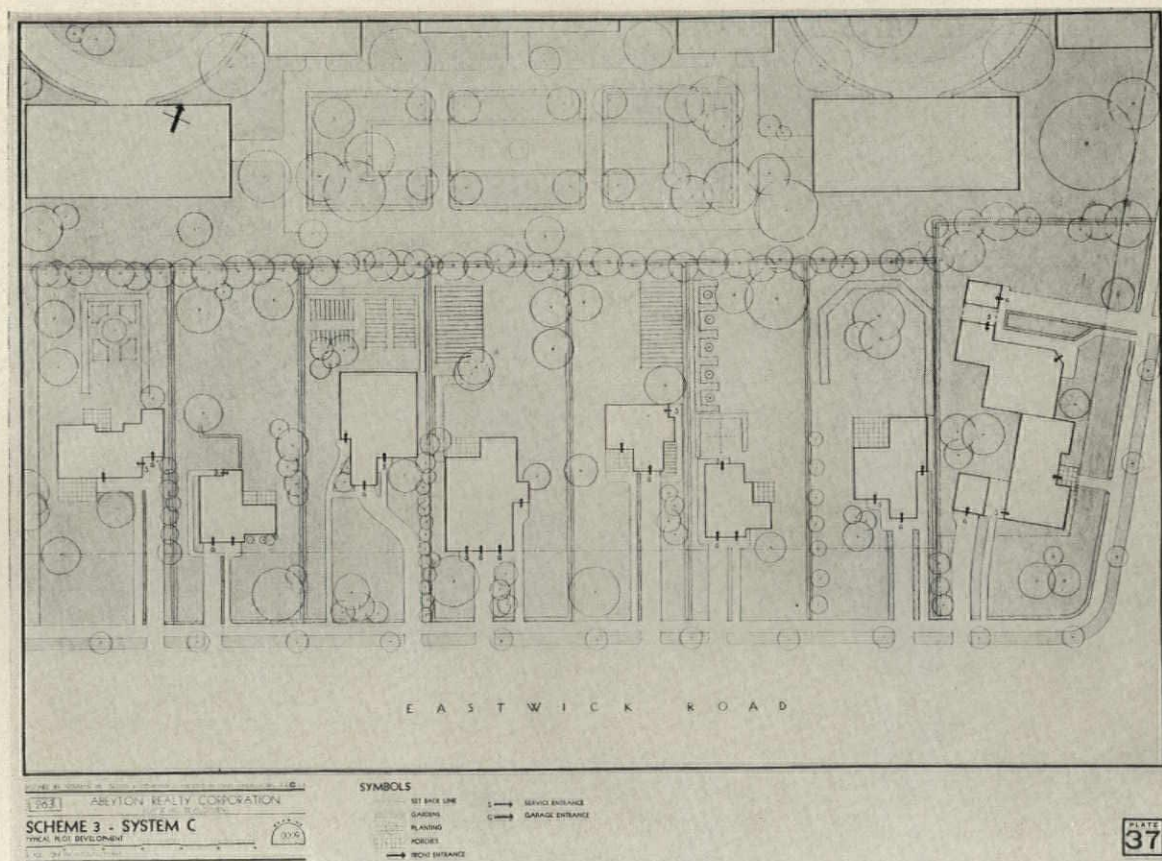
THE EIGHT CHARTS shown on this and the following pages are from an extensive report made in 1933 by Norman Bel Geddes and Company for the Abeyton Realty Corporation, a Rockefeller interest. 800 acres of undeveloped Cleveland city property were analyzed in their full complex relation to the rest of the community. From this examination, recommendations were made to establish a workable, financially sound plan for marketing the land



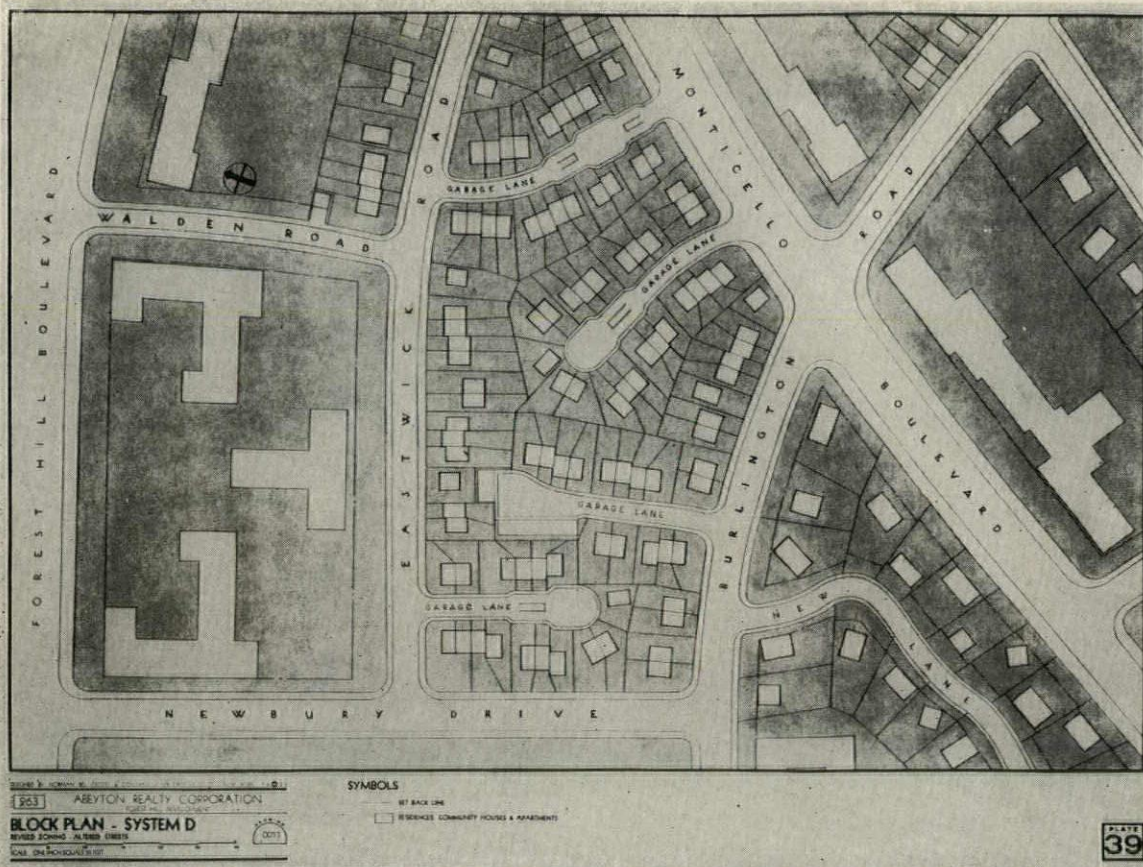




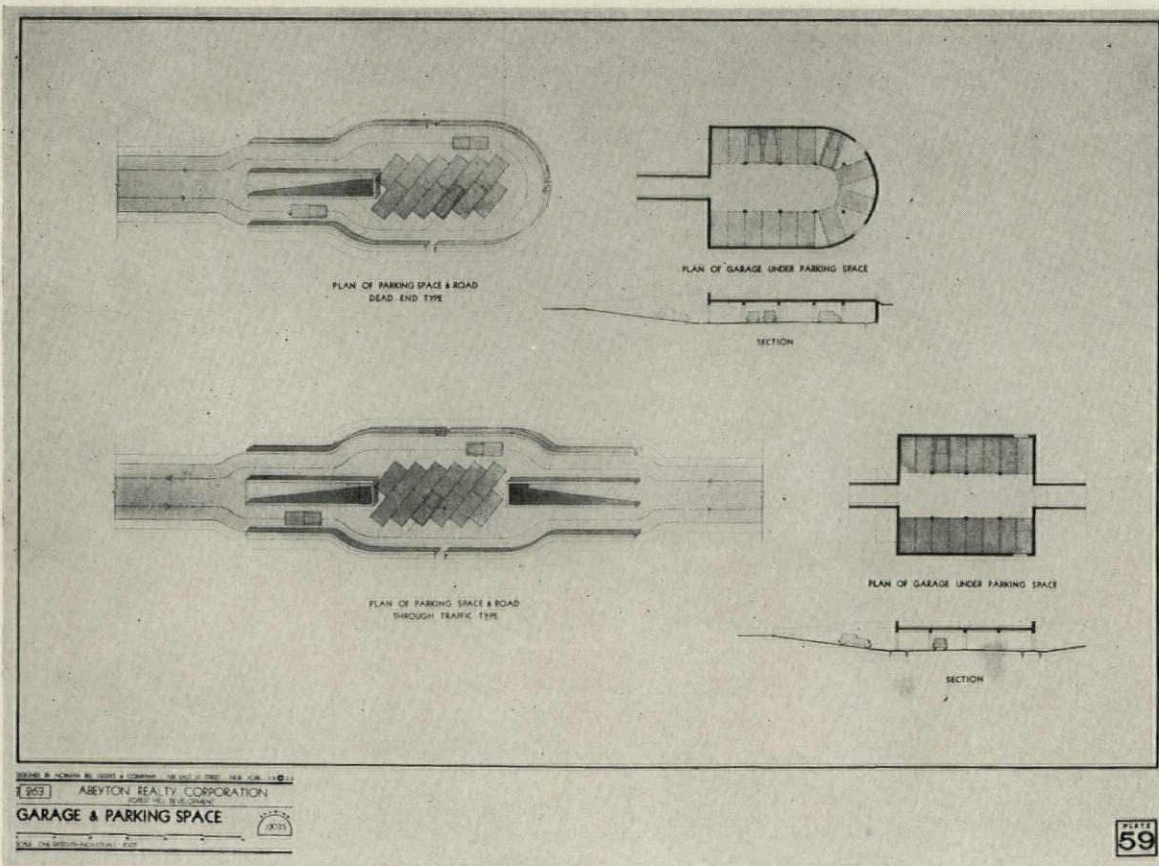
EVERY CHART represents a part of several systems of planning for the entire development, each of which was worked out individually for study and comparison. The tract was studied with streets unchanged and with new streets added; with existing zoning which permitted only single dwellings and with zoning revised to permit multiple dwellings in combination with single. Several arrangements of lot lines were drawn up and analyzed



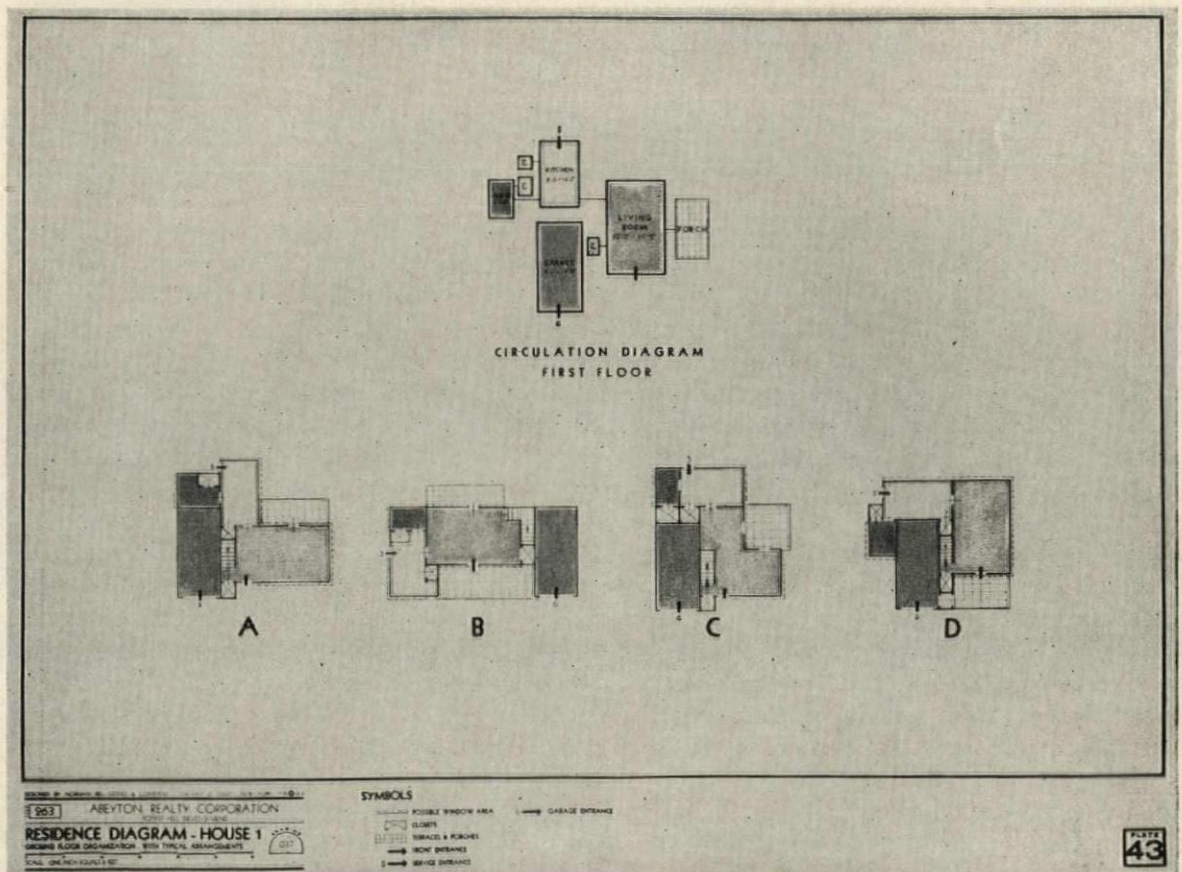




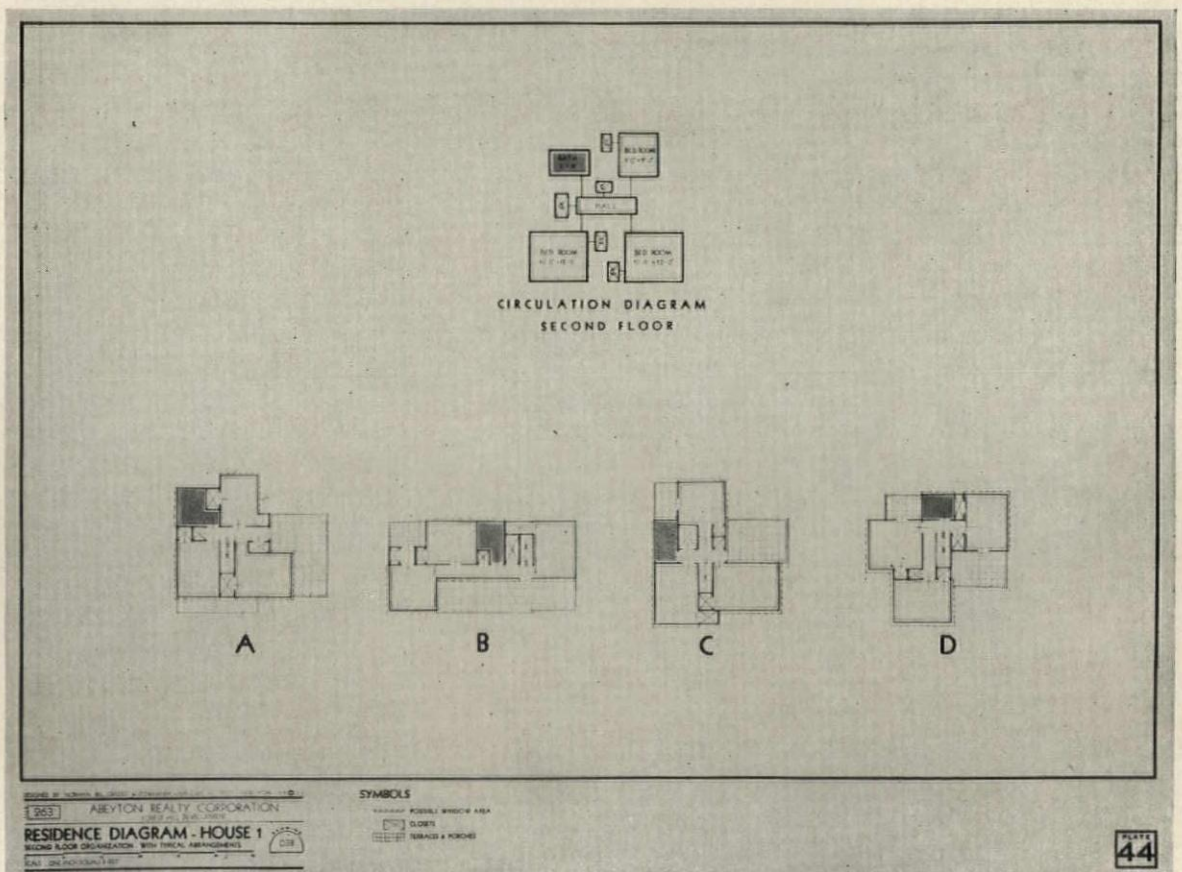
IT WAS THE constant aim of the report to find not only the answer to a specific real estate problem but to include with that answer an important contribution to modern housing. On this page, for example, is indicated an arrangement for subterranean group garages, located in dead end or through lanes, designed to serve the adjoining houses and to afford parking space above ground systematically arranged and screened by appropriate planting







THE CHARTS AND the study proceeded from the general to the particular, going into detail in relation to the planning, construction, and costs of individual houses, group houses, and apartments. On this page are circulation diagrams and various possible arrangements of first and second floor units for basementless six-room houses with garage, designed with an approximate cubage of 15,000 cubic feet to be built at 34c a cu. ft. for about \$5,000





is no fumbling around on paper in a vague search for ideas or "inspiration."

In the preliminary sketch stage all members of the design staff prepare idea sketches for any solutions that occur to them. These are then brought together and Geddes himself criticizes, improves and selects possibly three or four of the most suitable for further development and study.

During this study period, clay models are freely used, since the emphasis throughout is upon the search for form. Color and texture are left out of the picture until the form has been determined. Finally, working drawings are made, together with a scale or full size model. The findings of the research are usually detailed in a complete report, each page of which, as illustrated by the Socony and Abeyton charts reproduced herewith, concerns itself with a single point. A copy of this report, which is assembled during the course of the work in loose leaf binders and during that period serves as a reference work for the staff, is usually presented to the client at the end of the job.

In the matter of presenting his ideas to his clients, Geddes' experience in the theatre has stood him in good stead. He has an excellent understanding of practical psychology and knows how to focus the attention of the business executives who form his clientele upon the points he wishes to drive home. His admirably direct reports are neatly typed and illustrated by charts, drawings and photographs with the lettering set up and printed in his shop to keep them confidential. His working models are set up to be viewed from the best point of view and are dramatically illuminated to bring out their best qualities. He does not attempt to hide their defects, but he does realize that ideas have to be sold to the manufacturer as well as to anyone else, and the means he uses are wholly legitimate.

Sometimes he devises unusual forms of display for his ideas, somewhat analogous to the architect's rendering. The montage, shown on page 24, is an example of this, as is also the subject we used for this month's cover on the magazine, which is an interestingly composed assemblage of the actual materials to be used on his proposed Socony service stations. Each actual material is there shown in an area pro-

portionate to its actual quantity relation to the whole on the finished station, in its correct color and texture.

In the ten years Geddes has been working on industrial design, he has tackled and solved a large number and variety of problems. They are too numerous to catalogue here, but the most important of them are illustrated in these pages and in his book, "Horizons." To keep his staff busy at times when commissions were few, he carried on with them research and development work in the design of ideal forms for such things as automobiles, ocean liners, super airplanes, railway trains, and so forth, all of them looking to the future. While some of these designs seemed visionary when they first appeared, they were so soundly conceived that the world has begun to catch up with them.

Geddes' philosophy of design may be simply stated. He believes that for every given set of conditions there is an ideal form which does not need to be ornamented or decorated to make it beautiful. The preamble to finding the successful solution is to master first all the facts which may properly condition that solution. This done, the designer must pursue his search for the right form with every bit of ability and honesty he possesses. The acceptance of traditional things which have been outdated he feels is evidence of mental laziness. There is no laziness in him and by his work he has inexorably forced many others to drop their lazy habits. Geddes has the ability to think things out fundamentally and express them in the same terms. Several years ago he said the following to a girl who had asked his advice on learning to draw. "It is learning to see as clearly with your eyes closed as with them open plus the skill to record what you see. Never mind about talent but you must have concentration, and patience. Look at that glass of water. Now close your eyes. Do you see it as clearly with your eyes closed as open? No, try again, and this time concentrate on the relation and proportion of part to part, line to line. Add patience to concentration and even without any previous practice with a pencil you will surprise yourself." The postscript to this is that the young lady who at that time had "good ideas but couldn't draw" is today a successful designer in her own name.



# THE ARCHITECTURAL SCHOOL

## HOW CAN IT PREPARE MEN FOR ACTUAL PRACTICE

BY ELLIS F. LAWRENCE

EDITOR'S NOTE:—*The following discussion by Dean Ellis F. Lawrence of the School of Architecture and Allied Arts at the University of Oregon is based largely upon convictions gained from thirteen years' experience with W. R. B. Willcox in promulgating and establishing the system, ideals, and objectives maintained in that school, and nine previous years of futile struggling to patch and mend the evils of the old methods then accepted as standard. Professor Lawrence's remarks are somewhat rambling and extended, but they bear on one of the most troublesome problems confronting the architectural profession today—that of providing for its continuance in the future in a changing world in which merely following the traditions of the past would not entitle it to survival. Though it is long, we commend it for the reading of every architect who takes seriously his responsibilities as a professional man.*

AN ideal School of Architecture should be a happy home in which the student is helped to educate himself. There are three vital implications in this statement, the essence of which comes from Saarinen's remarks at the San Antonio A.I.A. Convention. The environment in which the student works should be a *happy* one; the staff should be *helpers*; and the student should *educate himself*.

How simple, yet profoundly basic! The problem of architectural education would no doubt be solved if every school could be conducted in accordance with these three fundamentals.

However, it is not easy to attain this ideal. The School is seldom master of its environment or the mechanism which makes it what it is and there is no place where one can study the technique of teaching architecture except in the doing of it. Practicing architects, many of whom are used as teachers, "tell" their draftsmen, which may be helpful to the efficiency of the office, but cannot be considered the best way to *help* the student *educate himself*. Moreover, there are few schools which escape the influence of educational usages around them, which seem too often to measure success by the amount of information crammed into the heads of the students,

and in which teachers are dictating what—when—and how the students think.

Let us consider first the most important influences entering into the making of a happy school environment. These appear to be—the locality; the physical plant; the inter-relationships between staff members and students, and pedagogical methods.

### *Location—City or Country?*

The tempo of the large city is fast, but it offers the best laboratory of construction and usually better collections of art treasure. The city is impersonal. Its horizons are often limited. It is apt to drive its citizens into themselves, or into exclusive groups, to find any semblance of peace.

On the other hand, the life of the small city or country town moves more serenely. Though it sometimes is as provincial as New York, it is more often nation-minded. Its citizens share more in communal life. Sometimes its horizons are wide, spreading out to the sea, the mountains, streams and meadows. If it is alive and building, or if it is near enough to the large city where contact with actual building operations is available, it is not a bad place for a school of architecture.

Good schools are found in the country and in the city, indicating that other considerations are more important than the location of the school.

It is the writer's notion, after being trained in a large city school, and having organized and conducted a school in a small town, as well as having visited and studied most of the architectural schools in the country, that the happiest environment, and the most human and clean, is more often found in the smaller cities near the country. Undergraduate life especially responds to such an environment, while graduates with more maturity and a more fully developed sense of values will no doubt find in the large city that which they need in the way of diversified building prac-



tice, masterpieces and art collections. This does not mean, however, that no graduate work should be given in any qualified school.

#### *Physical Plant*

There are good schools in ugly buildings, with little or no beauty around them, but, obviously, if the environment is to be the happiest and is to demonstrate a practice of what the school preaches, the plant should have charm and beauty. Even simple and inexpensive quarters may be attractive, as witness—John Galen Howard's "Shack" at the U. of California, or the plants at Southern California and Oregon, built around intimate courtyards where one can meditate or converse according to his mood. The atelier or workshop, rather than the classroom, should dominate the scheme. Part of the plant, at least, should be a laboratory in which the painters, architects, sculptors, and craftsmen may experiment, and part should be set aside for some permanent collections and embellishments.

#### *Inter-relationships of Personnel*

Outweighing in importance the locality, the physical plant, or pedagogical methods, are the intricate in-relations between administrative Deans, staff and students, and the public. Here, often, is the stumbling block in the way of attaining Saarinen's ideal of a "happy home." An unsympathetic overlord; an autocratic Dean lacking in understanding; a staff warring among themselves or intolerantly pedantic, or oppressed by superimposed authority; a student body torn by jealousy or indignant at favoritism, injustice, or unfairness—one of these can wreck the enterprise.

The ideal would be to cement all the individuals involved into a genuine cooperative undertaking in which all are free, and to protect that freedom by a sincere and deep appreciation of the rights of others. In such a group it would be disastrous to one's own prestige to be selfish, intolerant or arbitrary.

So vital is this phase of the problem that anything which can in any way disturb the serenity of these human relations should be studiously eliminated, and only those things conducive to bringing out the best in human nature should be allowed to remain. Even the minutiae of operating the school could well be examined and questioned from this viewpoint.

In all frankness, this is seldom done and in the system are still retained many diabolic remnants from an archaic education where barriers are built up between teacher and student; where subject matter is neatly pigeon-holed in place of being correlated; where students are regimented and driven;

where superimposed discipline, instead of self discipline, rules; where inferiority complexes are made worse, or superiority complexes made more unbearable; and where teachers are slaves to some master.

In such, where can one find a spirit of contemplation; how can a right sense of values be expected; and how can a happy environment result?

The late Dr. Prince Campbell, President of the University of Oregon, once said of the kind of democracy for which we should strive "It has the minimum of restraints and the maximum sense of obligation." Here is the answer for education, as well as democracy.

The writer would like both this thought of Dr. Campbell and Saarinen's statement inscribed over the doorway to every Architectural School. If lived up to, a new architectural education would soon sweep the country, largely because under their beneficence right human relations would result, and the soil be properly prepared and made fertile for the full germination of the seeds planted in it.

Saarinen's implication that the teacher should be a *helper* is wise, not only to make for a more happy environment, but because the student should *educate himself*. Certainly it is more friendly to help and counsel than to teach, in the accepted meaning of the term. Some things in architecture can and should be taught because they are factual things, but most of the study of architecture falls into the realm of aesthetics and ethics, which cannot be taught as factual things are, and which must come from within the student if he discovers their rightful place in his personality and character, and in his art.

Before passing on to Methods and Pedagogy, it might be well to consider what the "perfection" means, which is often seen in exhibits of student work. Obviously the instructor has been doing the work the student should do, unless the student is already a master. When winning is the objective, is it not likely to drive the teacher of design into the policies of the football coach, if he is to hold his job?

One student recently wrote—"Competition to me always spells compromise." There is no place for compromise in "self education." It is very foolish and futile to bluff oneself. The architectural student, in the right environment, does not need any false objectives or artificial stimulants. They are bad medicine for him and befog his mind. He should be in competition only with himself, struggling to develop his own abilities 100%. Added to all this is the stimulating experience of creating beauty and orderliness. What more does a wise



and understanding teacher need to help a student who has already felt their lure, else he would be taking Business Administration, Coaching, or something else?

Because we are still on the subject of Inter-relationships and the happy environment, it seems necessary to condemn not only competition, but the antiquated adjuncts of judgments (who is competent to judge?), grades, honors and honorary societies, and even the barbaric methods we still use in examinations. If we would clean the desk of these impedimenta, it might be very pleasant to act as a helper to the earnest students (which architectural students usually are), and feel the stimulation of understanding co-workers in the common purpose of making a "happy home in which students are helped to educate themselves." Speaking of judgments, how much better it is for the student to learn to judge his own work wisely, than to witness the usual debacle that follows even the decisions of the wisest juries.

#### *Methods—Pedagogy*

To discuss Froebel or Dewey in such an article as this would be out of place, but pedagogical methodology plays an important part in building a school environment, as well as in helping students to educate themselves, so here are a few remarks on the subject.

An apprentice, if his master is the right man, may go farther than the school man, and some profit most from this or that system. Given a great teacher and a student, methods and physical environment become relatively of minor importance. Yet it does seem as if the educators could agree on some fundamentals upon which a method might safely be built into sound pedagogy, without danger of stifling experiment or growth, or developing killing standardization. Here are a few which appear to me basic enough to start a creed.

(A) Each student is an individual, endowed with certain talents and influenced by certain experiences, training and environment.

If this is accepted, out would go standardization, uniformity of method, and mass training; everything, in fact, that cripples or retards development of the individual student, according to his particular needs. It means special medicine for each special case. Anything else would be a surrender of the ideal behind the processes of the school, i. e., the very maximum of real service to the student.

(B) The best education is free in method if it is to be dynamic and not a dead thing. Accept this and any formal system of approved schools is dangerous; authority superimposed

on staff or students is detrimental; false objectives, such as winning grades, medals, or honors, cannot be tolerated; and examinations must be individualized to suit their purpose of ascertaining what the student knows.

(C) Factual things can be taught by instructors, but æsthetics and ethics cannot. They must come from within. They must be discovered by the student. This means, if the teacher seriously respects the mind and soul of the student, that he moulds his methods accordingly. He must be able to win the confidence and trust of the student in order to guide him to educate himself.

(D) The project method is sound. This fixes the importance of the program and gives a rare opportunity for "learning through doing," and arouses interest in the need of knowing and understanding theory courses in which can follow the experience of "doing."

(E) Countenance no divided responsibility anywhere in the system. Accept this and it becomes necessary early to clarify the student's responsibility to himself, his fellow students, and the staff, as it does the duties of staff and Dean. A goodly part of education comes along the way from these inter-relationships. Playing a constructive part in the group life is part of the game. "The minimum of restraint and the maximum sense of obligation" cannot maintain without fixed responsibility.

(F) The urge for creative expression is one of the most powerful motivating forces in architectural education. Why, then, contaminate this choicest of objectives by false motives—to win to please teachers, or to do it the way the judges would want it done. Education has done much violence to this rare attribute by keeping it in a certain bondage. The freer it is, the less interference done to its functioning, the more likely it is to be the pure thing. No greater responsibility lies on the teacher's shoulders than to nurse tenderly the creative abilities of each student into the right channels. Otherwise the results are imitative and abortive. The new architectural education will stimulate original expression more sensitized to modern civilization. The old brought closer plagiarism from the average student.

(G) Architectural Design is the backbone of architectural education. All subjects play into this and, through it, interest is stimulated in technical and cultural subjects. It draws to it the allied arts. Being given by the project or case method, the program is all important. The making of the program, then, cannot be delegated. The student and his teacher should make it. The research involved is good for both of them. The student learns by it and



the teacher, because the individual student is the "case" for him, becomes more conscious of the needs and interest of that student.

#### *What's in a Name?*

New York University has recently adopted the Oregon name—"School of Architecture and Allied Arts." Others choose "School of Fine Arts" or "School of Fine and Applied Arts"; but most use the simple and direct name of "School of Architecture." Why more have not used "School of Design," I wonder.

Whatever the name, it should signify a definite type or conception. The writer is suspicious of the name "School of Architecture" because he sees the ideal school as comprehensive in its scope as is architecture itself, which draws into its collaborative undertaking the engineers, landscapers and city planners, interior decorators, painters, sculptors, and craftsmen. If all these considered their work a part of the building process, and the public accepted architecture as such a collaboration, only then the name would be excellent.

The lesson of collaboration can best be learned in such a school and anything which appears to isolate the architect from his fellow workers in the design and execution of the building is hardly the most desirable choice.

The writer also rejects "School of Fine Arts," for it, like "School of Architecture," seems to imply a cult of superiority—and anyway, why Fine Arts? It, too, suggests invidious distinction by omitting applied art from the picture. Applied art is perhaps the most important phase in raising our artistic standards.

It is good pedagogy to build into the environment of the school all those elements which must be correlated in the process of building. If each element is on a parity with every other element, all are strengthened by such association. Architecture may be the Mother Art, and the architect the co-ordinator, but let us be frank and admit that a better architecture results when all the designers and craftsmen can play together in the undertaking, without undue interference. Leadership is inevitable and it will go, in the long run, where it belongs. The architect, if he is worthy of the name, need have no fears of being supplanted. If he is not worthy, someone else should take his place.

Architects seem sometimes to be very jealous of their prerogatives—a Renaissance habit. The Gothic Guild might teach us many helpful things in this modern game of building.

The writer likes the name "School of Architecture and Allied Arts" for Oregon. Some day there will be a great "School of Design,"

where architecture is one part of a great workshop in which all the processes and materials of design are at hand and where all concerned are striving for one common major objective, to design and build beautifully.

If the "School of Architecture" maintains, as it probably will, let us preach that architecture is a collaborative art, and that good architecture results in proportion to the degree of collaboration between the landscaper, the decorator, the painter, the sculptor, the craftsman, the engineer, and the architect, as well as the mechanics and the constructors; and then let our Profession practice the preachment in the field.

#### *Organization*

A sound premise to follow for administrators and for groups alike would be to avoid divided responsibility. In other words, hold the administrator or group strictly accountable for performance by fixing what their responsibility shall be and give them all the power needed to exercise it without interference.

Another sound premise is that the more freedom an individual or group has in solving problems, the more growth, the more breadth of vision they have, for they "learn by doing."

Inconsistent with this is a department of architecture *under* Engineering, or Fine Arts, or a College Faculty, or anything else, if by being "under" means being interfered with. The technique of teaching architecture is, or should be, peculiar to itself, for it can because of its nature be freed from many of the handicaps involved in teaching other subjects. Its style should not be cramped by being obliged to conform to rules superimposed by faculties not intrusted with the education of architects.

Let us leave this subject by stating that the maximum autonomy is to be desired, consistent with the obligation of every unit in an Institution to its ideals and practices. When these ideals and practices prohibit the kind of training the profession should expect, the profession will have its say somehow.

Adequate budgets are absolutely necessary. Two hundred dollars per student is too little, and there are many schools operating on less.

#### *Staff*

The key man is the Dean. We have all kinds: engineers, musicians, scholars, pedagogues, practicing architects, has-been practitioners; rich and poor. Taken as a whole, they are a pretty earnest, fine lot, imbued with the teacher's zeal, and alive to what their job implies. Free them from the worries of budgets, interference from faculties outside of their departments, and give them the support and



understanding of the profession and registration boards, and they really might be delightfully human fellows.

But the ideal Dean has yet to be captured, for he must be a paragon of untold virtues, with endless understanding, native tact, eloquent and witty in address, a writer of parts, brilliant in debate, and something of a salesman. He should have a good knowledge of everything architectural and otherwise. Add to all these the stuff educators are made of, and you have a picture of what the Dean should be. Should there be such, the writer suspects he would be captured as the President of the International Council of Peace before he had gone far in the educating of architects.

Some day it would be interesting to have the pen of Hubert Ripley or Louis LaBeaume tell the architectural world what garden Deans are plucked from, and why. It would be betraying professional secrets for the writer to say more, though he must confess to certain amusement at the antics of some of those seeking for these key men, noting all the side issues which enter in to confuse the real ones, which are, proven abilities as an administrator and in handling human relations, breadth of vision, character, and understanding.

The writer always valued the counsel of Dean Edgell of Harvard in the Association of Collegiate Schools of Architecture. Not being an architect, Mr. Edgell seemed to approach the problems from an impersonal point of view, free from the prejudices which the practicing architect often picks up about his profession. This is not to be construed as an argument that the Dean should not be an architect, but it holds the suggestion, at least, that knowledge of architecture—yes, and achievement in its practice—are both less important than other qualifications.

Staff members should be reincarnations of Mr. Socrates, with that rare power that was his of making men do their own thinking, and making them, through analysis, logic, and synthesis, arrive at their own solutions, backed by sound convictions.

They are rare people, these sons of Socrates, especially those who have understanding and the milk of human kindness in their veins, which they needs must have if they are to be classed as great teachers.

Having no training school for architectural teachers (thanks be!) these men come as specialists in their fields, and their teaching ability is usually untried at first. They "learn by doing," which indicates experience is a vital factor in evaluating a teacher's possibilities.

Salaries being generally too low for success-

ful men to be able to give up their profession for teaching, there are many young men in the ranks especially when openings in the practice of architecture are rare. Perhaps the greatest crime in architectural education is that these unripened teachers, without the broadening experience of life, are assigned to teach the lower grades, and the lower grades deserve and need the most skilled talent as their guides.

Youth has a definite contribution in the teaching game. The young man brings with him enthusiasm, daring, idealism, and skill, but architecture must early be tied tight to the people it serves. The teacher must be social-minded if architectural education is to be humanized. Experience and age ripen and mature and broaden some men, and they, most of all, are needed in architectural education.

Generally speaking, there is no greater need in the system than endowments to assure all architectural teachers a sabbatical leave every few years. They sorely need travel and contacts outside the classroom.

Naturally, there is much suspicion of the educational methods of the architectural school among other faculties. "How can they work their students so?" (as if barred doors would stop them!). "It can't be good teaching when such a high percentage pass with high grades." "Of course an architect can't teach mathematics and economics, or sociology." "Architecture is just another vocational subject." "Arts and skills are not real education." Under present set-ups, service courses are given the architects by other departments. The writer's conviction is that the ideal would be to have as voting members of the architectural faculty all teachers giving courses to architectural students. The confrères of the writer will no doubt think him a candidate for a psychopathic hospital, but consider for a moment what a staff might and should be.

First of all, it is a cooperative undertaking, this helping a student to educate himself. Every staff member can contribute something from his contact with the student to what should be in essence a diagnosis by the group. Now, the architectural student is lost in large classes in mathematics, physics, sociology, economics, history, etc. These teachers, if they know the student as an individual, do not now sit in at the clinics of the architectural group.

Let each department offering these service courses delegate, with the approval of the Dean of Architecture, a staff member to act on the Architectural faculty. All would benefit and these men from other faculties would become liaison officers, strengthening the faith of the Institution in what the Architectural



School is doing, and in how it is being done.

The writer wants the work done by seminar and discussion—not in the classroom, but over the drawing board, around the court, by the fireside, or in the workshop, and from individual research. He wants it to tie into the Project when, and only when, it is pertinent to give it its deepest meaning.

For example, economics might be introduced as a part of a city planning project, or sociology as a part of a housing project. The doing first and theory afterward, because interest has been aroused and stimulated, is sound pedagogy. The factual part is thus vitalized.

As an architectural educator, the writer admits all these non-professionals might throw the machine out of kilter at first, but he believes it possible to get sympathetic souls from other faculties to understand the significance of this method of training.

### *The Students*

It is generally thought that there are too many studying architecture. The Bosworth-Jones Survey shows that this is regional. Some privately endowed institutions limit enrollment. State Institutions, supported by tax money, find it difficult to do this, though some have faced the issue of inadequate funds by limiting enrollment in their professional schools.

All can, if desirable, stiffen requirements for entrance and during attendance; but the story told by a venerable Dean of an old eastern School is pertinent: "I told A—— (mentioning one of the most eminent architects of New York) early in his architectural studies, that by no stretch of the imagination could he ever hope to be an architect—and look at him now. One never can tell!"

The writer agrees, "One never can tell," for he has seen many a student favored with great talent go on the rocks, and many starting with little apparent ability succeed greatly.

### *Shall the Student Pay? Scholarships*

By all means, as far as he is able. Some—deserving, needy and talented—should have scholarship aid, but a thing free is apt not to be appreciated as much as a thing earned and paid for. This life of ours in the U. S. A. is given too much to getting something for nothing, according to Moody, the bankers' adviser and authority on business conditions.

The writer favors the repayment of scholarships by the recipient, for his own good and that of coming generations, though he prefers this responsibility to be moral, not legal.

Paternalism weakens character and saps morale. There is such a thing as doing too much for students, as there is for citizens.

A University President once said to the writer: "We have all the money necessary to get the best teachers and students," a dangerous implication if he meant to go into the market, as in football, to outbid rival schools.

Fortunately, students on the whole are discriminating and go to certain schools to secure certain advantages. More and more they seek the great teacher.

Talent may spring up among the fisher folk of Astoria, Oregon, or Alaska, as well as among those of Cape Cod. For this reason, scholarship endowments should be equalized over all sections of the country.

The amount students should pay depends largely on local conditions. In State Institutions, the state subsidizes each student from state funds. It is the writer's belief that all should receive the same amount in such cases, and pay the difference between this subsidy and the cost of giving them good training in their respective lines. This is based on justice and would if put into effect solve many a strained budget in Institutions spread too thin over all kinds of courses. It would also tend against educating too many professionals.

### *Graduate Work*

When Atkinson of London made his survey of Architectural Schools of this country a few years ago, he made the remark that all were doing the same thing in the same way, with the result that the American architect seemed much the same in California as in Massachusetts. Liberalized education has of late tended to greater freedom in expression and local qualities are showing more and more.

Some advocate one great Graduate School. Will we never learn the dangers of centralization? Not many years ago, the late Gabriel Ferrand, of Washington University, told a group of educators what centralization had done in France and of their plans to decentralize, to re-vitalize architecture. Graduate work is needed in every strong school, wherever it may be. Undergraduate work is strengthened by the pacemakers in the Graduate School, and graduate work needs and responds to a live undergraduate group.

Healthy rivalry among the schools, able by environment and endowments to offer strong graduate work, will take care of the problem without a loss of freedom and initiative. It is a reflection on the school-men to assume they will proselyte or persuade their own students to remain with them for graduate work, when they should perhaps have a change of environment and new teachers. One general policy the writer can subscribe to—all things being



equal, the western student does well to go east; and—he has the presumption to humbly suggest—it might do the eastern student a lot of good to take his graduate work in the west.

The graduate years can well be years of specialization. There is certainly room for the development of graduate work in city planning, housing, interior decoration, landscape, construction, and TEACHING; and no doubt in other fields, such as acoustics, heating, etc.

### Degrees

The writer would like to live long enough to see a constitutional amendment to bar all "sich" undemocratic devices. Enough time has been spent in the past in trying to standardize degrees, to solve the intricacies of the New Deal. Better forget this problem and leave it—since we have to—to the Institutions themselves. They will do as they please, in their own very peculiar manner.

With the disappearance of the Approved School there is little or no need for standardized degrees. Let the graduate stand on his own. What he knows—that is where our interest lies; not in what labels he can legally attach to his name.

When Preparation for Practice is solved, the one thing comparable to the academic degree of old may be "Architect," after one's name; but in this the School plays but a part. Registration Boards and the years of experience prior to registration enter in before one can earn the title of "Architect."

### What Courses Have the Student of Allied Arts and the Architect in Common?

The writer does not like separation of courses into pigeon-holed compartments. He would like to use "Architecture" as the one catalogued course. However the curricula is set up, there are obviously many subjects all Arts allied with Architecture need, and which therefore can be taken in common. Among these are Graphics, Delineation, Design, and History. The taking of these fundamental or basic subjects by all majors at the same time brings them together on common ground and educates them toward their common purpose.

### Design—Construction—History

Design has been called the back-bone of the architectural curriculum. Design distinguishes the architect from others who build. However, it fails in the school if paper architecture results. Models and perspectives help, but more important is the way the student thinks about his job. The more he thinks in terms of three dimensions, the better his product. The more he thinks in terms of functions and relations

in his plan and how he is to build his structure, the nearer the process becomes reality, and approaches field work. Architecture is a collaborative art; therefore the architectural student should, as far as possible, work with fellow workers in allied arts. No school is complete without such facilities, as I see it.

There are few projects that do not call for something from each of these co-workers: the painter, the sculptor, the landscaper, the engineer, the interior decorator, and the craftsman. All may well serve as critics. Collaborative problems are excellent. Merely to have the work going on in the midst of activities in these allied fields is of great value. An ideal condition is where the results of the problem can actually be executed.

From this point of view, it is obvious that each student should have his own project. It must be his own task, to think through himself. Periodical sketch problems and the solo projects recently introduced at Minnesota by Roy Jones serve a definite purpose, however. Being done without discussion with the teacher, they serve as tests of progress. Judgments by any but the designers themselves are inconsistent with the methods for which this article pleads. Personal opinions, freely given by students and staff alike, are advantageous. The differences stimulate the man to make his own evaluations and this is education.

In passing, the writer wishes to register a protest against the *esquisse en loge*. It has outlived its usefulness and certainly is not a logical thing for such an approach as is here described. The ideal is to seek for the right solution—the very best the student can do—so why defeat such by tying the student for several weeks to a wrong solution?

The way criticism is given marks the success or failure of the teacher of design. To tell the student what to do is poison in many ways. Better far let the students make their mistakes, than to do their thinking for them. Mistakes are natural at their stage of development. Perfection in student work should be viewed with suspicion. Again it is a case for the offspring of Mr. Socrates. The writer has found three critics on the same project better than one alone. They torment the student, to be sure, but when once he sees the job is his, he must translate the varied reactions he gets into his own convictions for what they are to him, alone. This brings a painful effort always to exhaust his own resources and he is often dissatisfied with anything but the best performance he can make. He becomes a very exacting task master of his work and this also is real education for through it he comes nearer to



100% efficiency of talents with which he is endowed. Architecture is the product of society. The better it serves mankind the greater it is. Design in the school, then, must be humanized by sympathetic interpreters. It is the writer's hope that some day design will be taught as the stimulating initiation to Sociology, Economics, History, Education, Religion, Business, and Industry, as well as the Allied Arts and the technical subjects of construction, mechanics, etc. The design project certainly would be vitalized by so doing, and become a very much more real and vital thing.

To those who believe the student should be fed little by little, this spells chaos and confusion, no doubt, but the writer is seeking to educate for thinking, feeling, and understanding, rather than for the acquirement of factual knowledge alone. Believing in "learning by doing," and in "application before theory," the writer feels no hesitancy in advocating such an approach. He has tried it and is amazed at the facility of the students to assimilate when lured to find out for themselves.

All of which leads to the pertinent question—Are the Schools educating architects, or draftsmen? The writer's conception is that the School should make it possible for the student to educate himself as a free, thinking, questioning soul: that architecture is a splendid medium through which to accomplish this.

#### *Construction*

It goes without saying that construction must not be separated from design. Architecture depends on the skill and artistry in putting materials together. A museum of materials should be an adjunct of every school and the student should be expected to make his selection of materials and methods of assembling them for every project. This applies well to problems in interior decoration also.

Recently the writer saw a thesis done in a Canadian school. It included an excellent set of working drawings, and the design was creditable. Graduates usually jump into practice in Canada and England, it was explained. However, the writer feels the usual set-up in the States, requiring at least three years of practical experience in an office after graduation, before registration, is to be preferred. Even a five-year course is not long enough to give the average student the technical skill, scientific theoretical knowledge, and broad culture required for the practice of architecture. To add to the already over-crowded curricula in the schools such courses as are needed to substitute for office experience, is very questionable and can only be done at the ex-

pense of culture, technique, and artistry.

#### *History*

The youth of today is looking ahead as never before, for he is confronted with tragically pressing problems. He is pretty well fed up with the mess past civilizations have made of life. Perhaps this is the real reason why students are less interested in architectural history than they were ten years or so ago. History should be given largely to develop taste and cultural background. The writer believes it is more needed than ever, considering modern tendencies in architecture.

Before specialization, all majors in architecture and allied arts could well take a course which might be called "Civilization and Art Epochs," in which all the arts are stressed, as are their relations to their times. Following this might come the technical courses in History of Architecture, Painting, Decoration, etc. Identification of the masterpieces of old has its place, of course, but too much memory sketching work is apparently an awful bore to the students. The writer finds they respond best to the human part of the story. They are interested in biography, the story of the artist, as they are eager (when the subject is presented rightly) to profit by the experience of races. Whatever the attitude of the student is, he absorbs from Architectural History certain appreciations and applications. Cultural background is gained and taste stimulated.

#### *Service Work to Other Departments*

The Committee of Education, A. I. A., has done remarkable work in getting courses in Art Appreciation into schools and colleges. Architectural Departments, especially if the Allied Arts are associated with them, are splendid vehicles for giving such courses. These are becoming very popular on college campuses and are showing results in a more wide-spread and sensitive appreciation of art.

#### *New Schools—Upper and Lower Divisions*

There are too many architectural schools in some districts. Institutional rivalry, together with a growing interest in architecture, are largely responsible. New schools should be discouraged unless an adequate budget is available and the field not already filled.

There is a growing practice of dividing College education into Upper and Lower Divisions, the latter to build a broad foundation, and the former to give more specialized work. This is dangerous for architectural students if by it the student postpones his creative experiences in his chosen field and is deprived of being in the atmosphere of an architectural



group. This tendency does suggest that there might well be two classes of schools, the Lower Division school confining itself to giving essential basic courses. The determining factor might be the budget. A number of these Lower Division Schools would serve the purpose of tapping the students' interest early, and so be able to aid them in choosing their objectives wisely. But the School of Design or Architecture and Allied Arts should not be without Lower Division, Upper Division, and Graduate work.

*Where Does the B.A.I.D. Fit  
into the Picture?*

There have been few efforts made by architects which have been more remarkable for unselfish and inspired service than the B.A.I.D. The writer wants to see it continue to grow in usefulness. He would like to see Chapters in every large city, closely allied with Education Committees of A.I.A. Chapters. He suggests the following activities for the B.A.I.D.: Ateliers for non-school draftsmen; clearing house for the new Mentor or Counsellor system; handling certain of the national competitive fellowships; criticizing the problems (the student in the Atelier wants to know what his peers think of his work, and why, more than he does to win a medal); strengthening collaboration between the arts of architecture, painting, sculpture, and design.

The writer agrees with a former Director of the B.A.I.D. who declared that the B.A.I.D. should not, itself, be in the field of education. That responsibility is the school's and divided responsibility is always dangerous. Programs cannot be intelligently written in New York for a boy in Oregon, for the boy's needs are not known by the writer. For the non-school draftsman, the case is different. Now he is often without any opportunity for training outside the office. Alliances between the B.A.I.D. Ateliers and the Schools of Architecture for Extension work would be wise.

The same amount of time now spent by B.A.I.D. Juries in impossible judgments would be a contribution to every participant if spent in analyzing and criticizing each design. Judgments do no one any good, and usually do harm.

The B.A.I.D. has plenty of valuable work to do without entering into the field of the Schools, and the writer finds it difficult to understand how certain of the Schools can delegate program making to those not very close to the student, or how judgments of student work in the schools can much longer be countenanced as sound pedagogy, especially

if those judgments are made by those not aware of what the special training objective is, back of the instruction producing the work.

*The Joint Committee on  
Preparation for Practice*

Nothing more constructive than the organization of this committee has happened to the profession of architecture for many years. At last the profession, through its Committee on Education, the Registration Boards, and the Schools, is cooperating to the common end that those entering the profession be given every opportunity to be properly prepared. It should be obvious how vitally each fits into the scheme. Where each has for so many years been moving along according to its own notions, differences of opinion naturally exist, but these will now be ironed out around the Round Table, and adjusted in more kindness and mutual understanding of objectives and duties. This deserves a special article, so pregnant it is with possibilities.

Both the Schools and the Boards serve the profession, which should be interested enough to participate in helping the youth—the future architects. The Schools give theory and culture, and train thought processes. The Profession must see to it that adequate practical experience may be secured and the Registration Boards must examine candidates so that the public interest be served.

It takes team play to do the job and this means regard for the other fellow's opinion.

*Shall There be Approved Schools?*

The writer says "No," for approval by any group means stultification, loss of freedom, and a tendency to standardization. Better raise the standards of architectural education by more friendly and wiser means, by establishing intimate contacts between these three groups. Do this through travelling representatives from the Joint Committee, not from any one group; also through Chapter Education Committees and through the Mentors or Counsellors.

Several years ago, the association Schools repudiated their approval of its member schools by abolishing the "Standard Minima."

The Institute does not need "Approved Schools," for men joining the Institute should stand on their own feet wherever they come from. The Registration Boards in certain States call for Schools approved, to be sure, but they have in most cases already eliminated such classifications when School graduates are candidates and should, according to the writer's notion, remove "approval of schools"



from their documents and rules in determining the probation period for those who have not attended the favored school. After all, their function is to protect the public. Why discriminate? It endangers the legal background of registration and smacks of injustice. Why not, regardless of educational advantages, confine registration to men who have reached a certain age (say twenty-four), and who have had at least four years of practical experience, and who pass the examination? There have been many great architects who have never attended an architectural school.

#### *Where is the Profession Going?*

Sometimes it has seemed impossible to the School men to answer this question, but if it cannot be answered, how can the Schools be expected to know how to educate architects for modern practice?

Once, the Institute more sensitively reflected the objectives and ideals of the profession. Its Conventions are no longer forums for discussion. Perhaps sub-territorial conventions are needed to offset the ever present curse of centralization. However that may be, it would be constructive to take account of stock and settle where we are going. Will it be the business way, with solicitation, advertising, organization, getting the job at any price? Or will it be the professional way, where service rules? Will we go into the building and promotion game, or will we all become salaried men for operators or government? Should we be engineers, or artists? Shall we become collaborators or dictators?

The profession should speak in no uncertain terms and demand the practicing of its ideals.

One thing is certain—whatever happens, the architectural designer will find some niche in which to practice his art. The writer, feeling the professional ideal must be preserved, will do in his own school all he can to train for ethical, professional practice, even if in his innermost heart he knows by their eloquent testimony the disappointments his students face when they “buck” the field.

But the School men simply cannot make salesmen and artists—business men and professionals—at the same time. The Profession must help them in this problem, by declaration and example.

Thomas Jefferson once wrote—“I agree with you that there is a natural aristocracy among men. The grounds of this are virtue and talents. The natural aristocracy, I consider as the most precious gift of nature, for the instruction, the trusts and the government of society.”

#### *Registration and the Schools*

Many question the wisdom of surrendering Registration to Political appointees, believing the Institute should have controlled it as does the R.I.B.A. in England. Others question the principle back of registration, believing aesthetics cannot be licensed without harm.

The Committee on Preparation for Practice will no doubt safeguard registration where it can. The Schools should be of value in the system, seeking to train for what will be the dictates of the Profession. They should be of service in examinations because of their experience in such techniques. If examinations are in two or more stages, as some advocate, the first stage could well be handled by the Schools through the various State Boards. If the methods and standards of these Boards meet the approval of the Schools, the passing of the first stage (theory and design) might well be the basis for the School degree.

As the Profession fixes its destiny, and the Committee on Preparation for Practice fixes the standards for registration, the Schools will have a more defined duty than they now have.

#### *Contemplation*

How we all need time for it in this whirlpool of life! And somehow, in the schools, we must have it. Here's an introduction to a research report, showing how one student feels:

“As I close the last book which I have been reading about great problems of government, of life, of souls, I think of Kahlil Gibran's words—‘No man can reveal to you aught but that which lies half asleep in the dawning of your knowledge’—which gave me a strange peace, an inner assurance that beneath the jumbled pages of others' thoughts, I have a realm within me which only reflection may bring to life. There are so many words that one's mind grows weary of the printed souls of men and wishes to seek in solitude what broken bits of ideas lie dormant, and yet alive, in one's own mind. Many ideas ‘lie half asleep,’ and reading only piles more shreds of other men's minds on them. So, I have paused in my reading to see whether or not the dreams of others have fed or starved those which are within me.”

In closing this article, let it be remembered that over the door to our School, we are to engrave something like this:

“We want this School to be a happy home where the student is encouraged to educate himself.”

Here is “the minimum of restraint and the maximum sense of obligation.”



# TRAILER DESIGN BY AN ARCHITECT

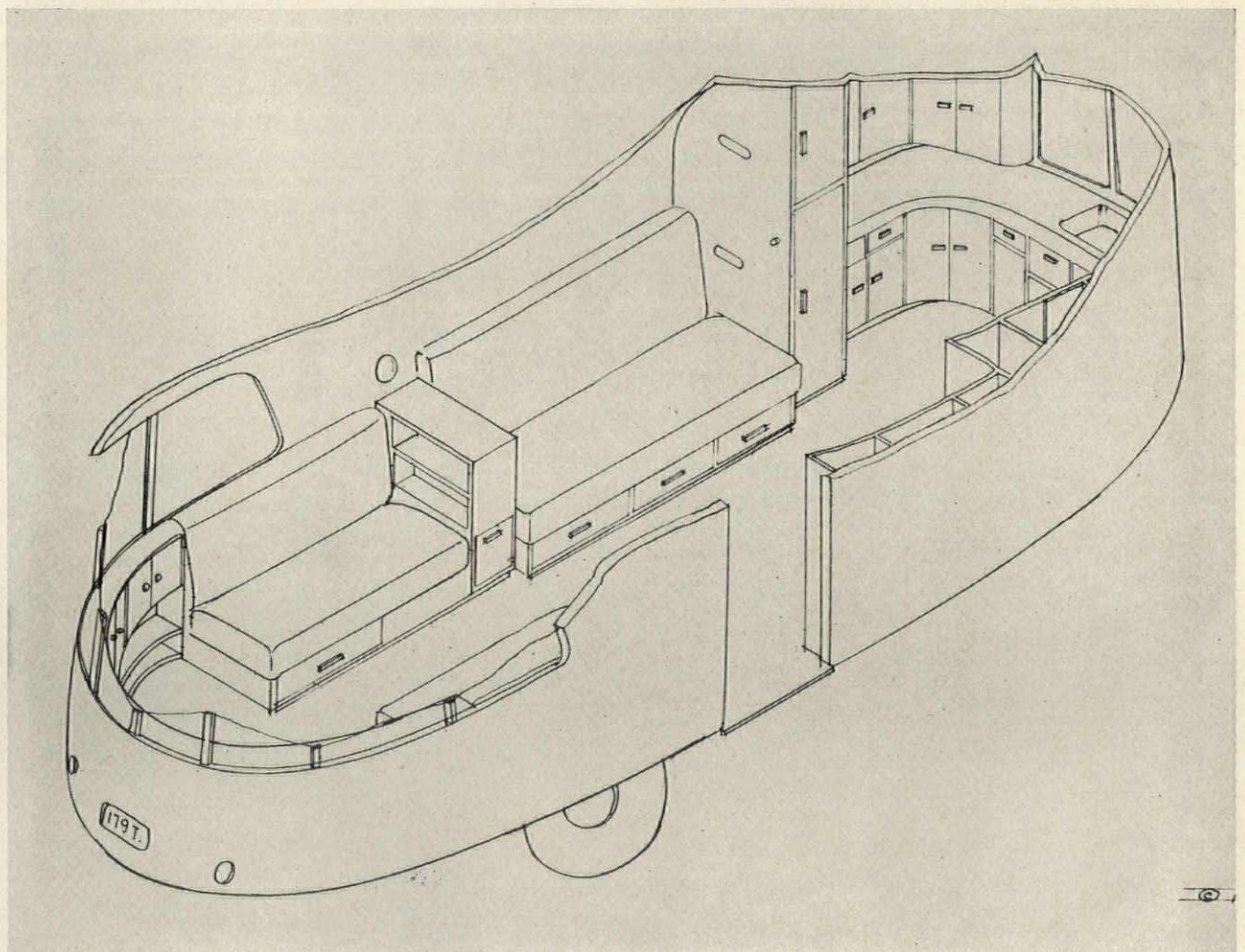
A SMALL HOUSE SPECIALIST PLANS FOR MOBILITY

BY ALBERT KINGSLEY

FITZGIBBON and Crisp, of Trenton, New Jersey, who have for years been fine body builders, recently decided to go in for the building of trailers to meet the growing demand for that type of movable abode. They looked over the field and decided that many of the trailers produced to date were poorly built, designed in bad taste, and not endowed with the elements of appearance and construction such as found in the present-day automobile. It appeared that the quantity-produced trailer was very likely to be modeled after a home-made affair built by the producer originally for his

own use. There appeared to be a good prospective market for a well designed and soundly constructed trailer that could be sold for a price within reach of the average family.

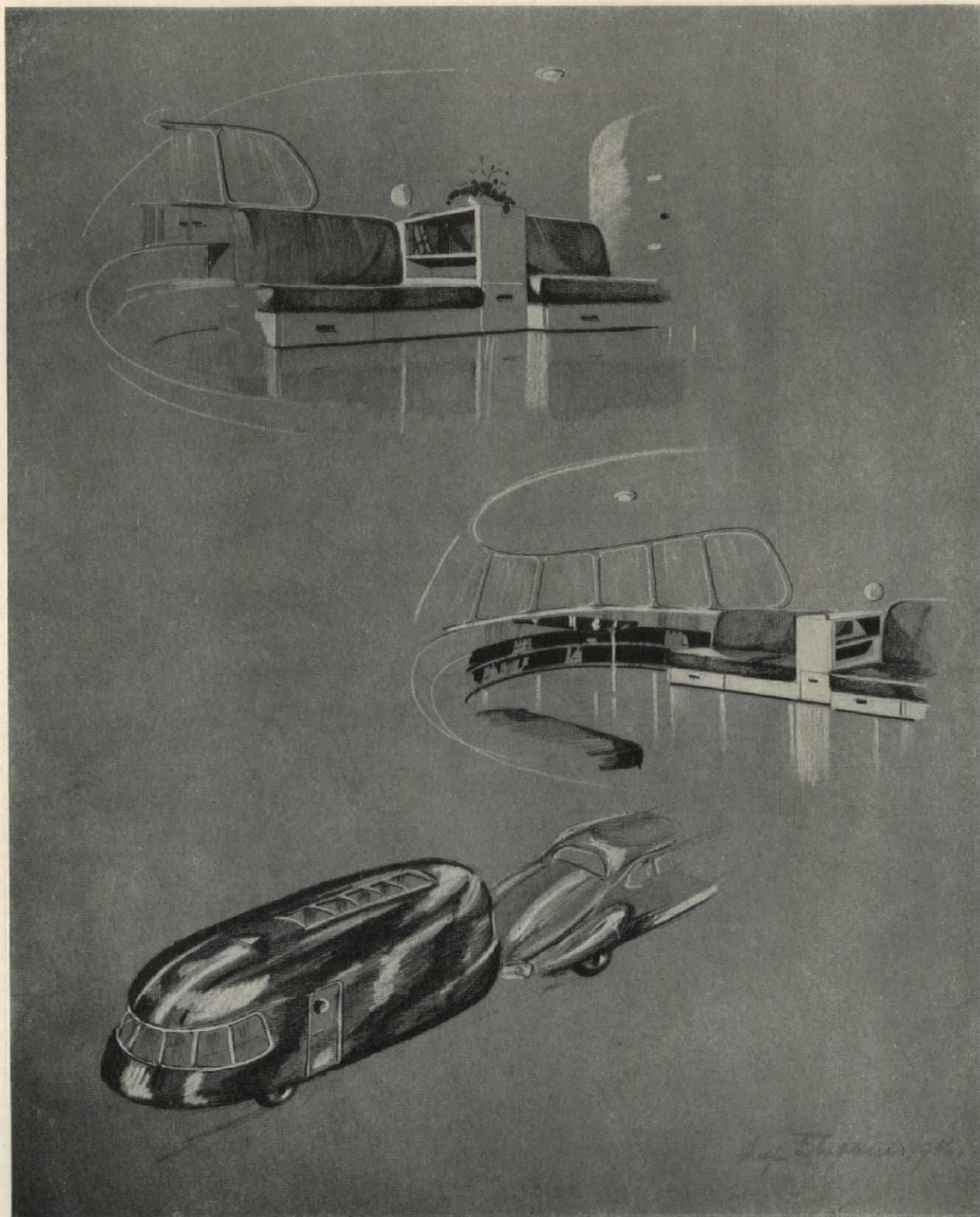
At about this time, the president of the company, George R. White, very wisely decided to engage an architect to design and plan the arrangement of the proposed trailer—one who had proven his skill at planning small, compact, convenient houses and who was thoroughly conversant with what the small house client wanted. He turned to Royal Barry Wills of Boston as being such a man.





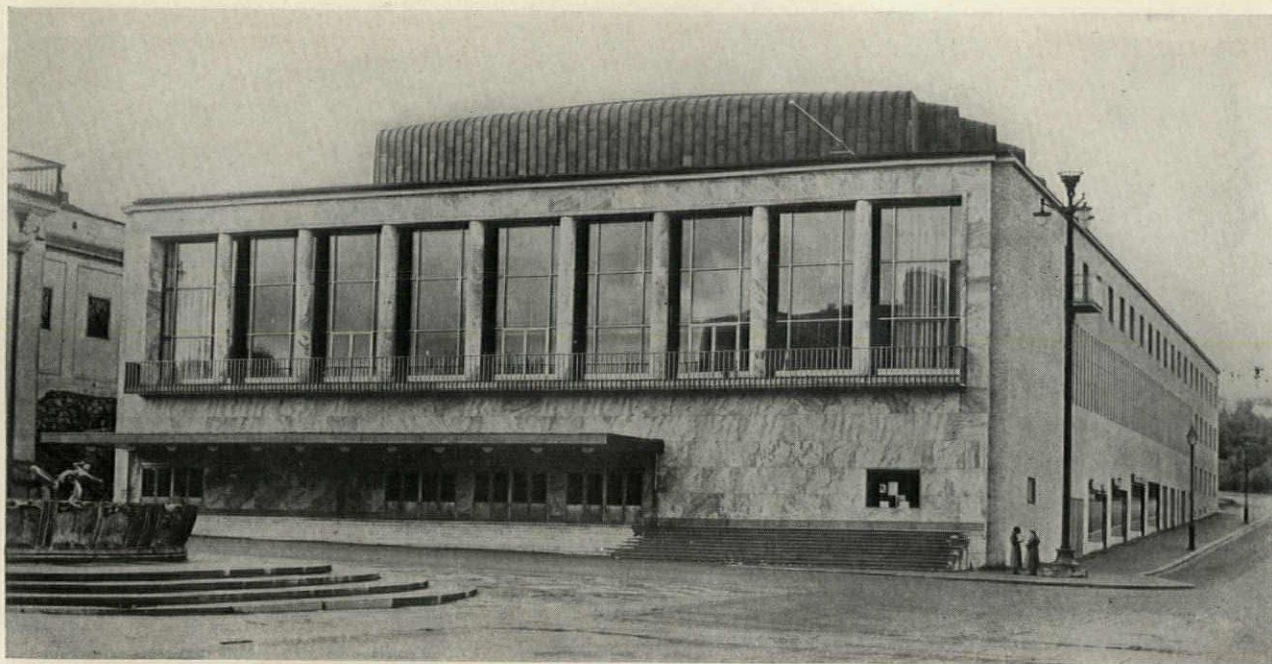




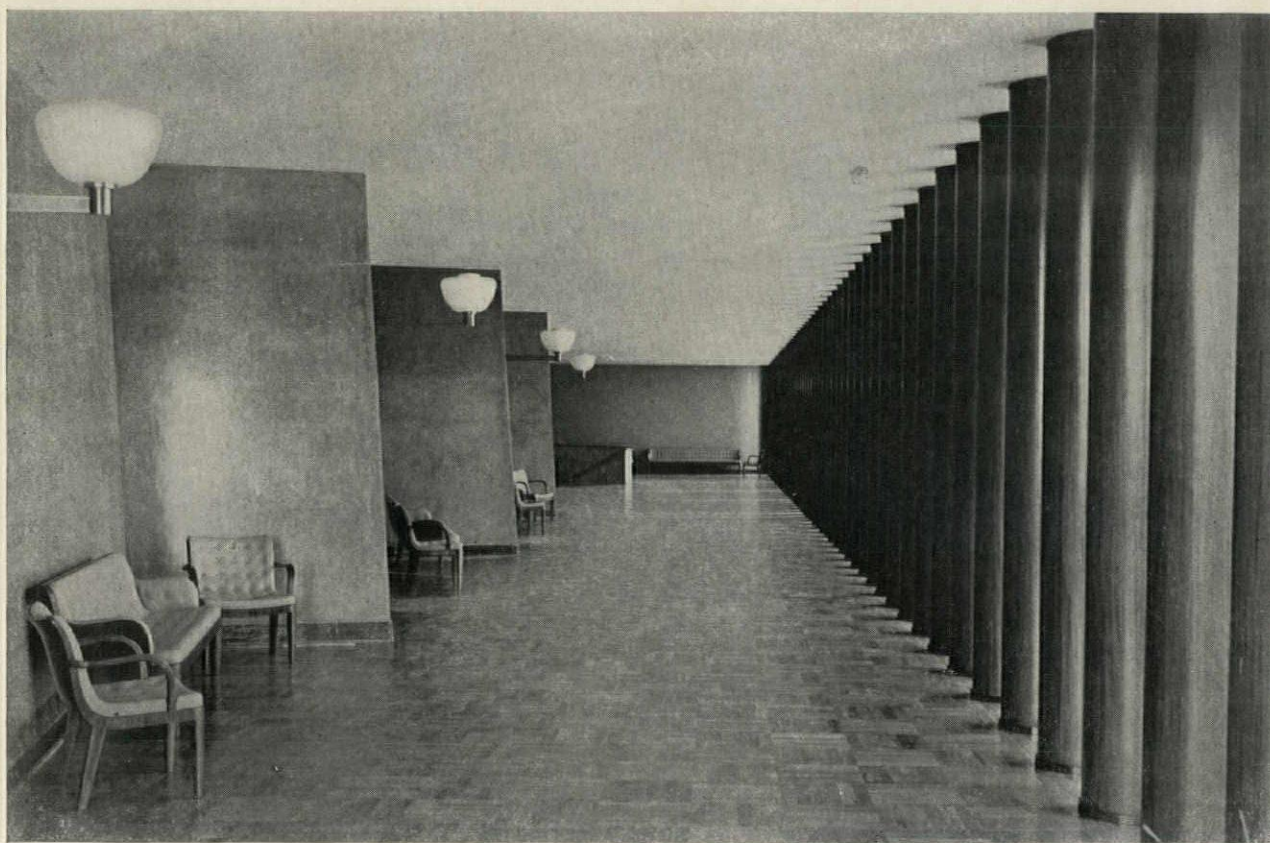


*Interior and exterior sketches drawn on tinted paper by  
Hugh Stubbins to visualize the new trailer designed by  
Royal Barry Wills for FitzGibbon & Crisp, Trenton*





*A recent European building of more than passing interest is the Gothenburg, Sweden, Concert Hall by Nils Einar Eriksson, Architect. Its front wall of light Gropptorp marble and its side walls of cream colored brick give it a less sombre feeling than that found in many music halls of the past. The upper promenade (below) is flanked on the street side by 51 polished mahogany columns spacing 52 engraved Orrefors glass panels tracing the story of Music. Two of the panels are shown on the next pages*







*One of the Orrefors glass windows designed by Simon Gate to go in Nils Einar Eriksson's Gothenburg Concert Hall. The series depicts the history of Music*





*A window in Orrefors glass from the new Gotthenburg Concert Hall; this one was designed by Edward Hald*



# ARCHITECTURAL EDUCATION

BY RALPH WALKER, F. A. I. A.

"THE school is not a scheme repeated in the same way year after year, but grows by the interweaving of generations of students and their creative solutions of their problems to an ever-increasing intellectual and practical importance."—*Eugene Steinbof*.

Generally, in discussions on architectural education, more expression is given to ways and methods than to predetermine a desired result.

What we call a formal education, that which we obtain in schools and under schoolmen, can rarely be more than an initiation into the possibilities of future development.

In early education there should be no statement as to how to make architecture or even how to become an architect, but rather what are the fundamental needs of an approach to these results.

In a very broad sense an architectural education, one thought of as being continuous, might be based on the development of four factors: the evaluation of experience, the creation of a philosophy, an understanding of limitations, and an appreciation of imagination.

*Experience:* It would seem that the growth of knowledge is progressive; it is evolutionary and is best built step by step, each step being a fully realized and appreciated experience. Its value is based on the self-development of judgment. It can never be abstract but must have a definite meaning to the individual in his *own* relation to society.

Acquiring knowledge comes through an understanding of the whole by a little-by-little accomplishment of detail. Nor has detail any meaning except as a part of a whole.

The major problem of any professional pedagogy is to promote a desire for further experience and to do it in such a manner as to make that desire insatiable.

Architecture is a vital, living thing. Architects do not collect experience for its own

sake but to give depth to the practice of an art and a science; an art in which understanding may be broadened only through practice.

The student then, first, should be led and guided to choose problems within his experience, and later to choose what further enlargement of experience he desires.

For the only volition in gaining experience should be within the student himself. In the final analysis his success comes from an appreciation of his own experience.

No school should exist merely to produce graduates but to give to the world men whose lives have been opened to judge social and architectural experience and place a value upon it.

*Philosophy:* The architect in his life must somehow or other attain the ability to coordinate thought and further to evaluate his thoughts and experience into a personal method of work. He should be able not only to make research so as to gather information for a clear definition of a problem, but he must understand the fundamental *whys* of the problem itself.

He, surely, must learn to tie up the world outside to his own judgment of it.

How can architecture be other than an abstract theory or at best a series of external formulæ unless it can agree with a philosophy which can be enlarged to meet new social circumstances as they arise.

The architect has the opportunity of working out a philosophy for a very strong and definite position of leadership in the community, especially where it is affected by his design and his abilities.

Architecture is a profession that can be governed by philosophy in that it is possible to study principles of human conduct and thought and place them in relation to physical sciences.

That the architect must be a philosopher is obvious, else he becomes bogged down in ma-



terials and abstractions to the extent of forgetting the underlying *why* for which he designs.

*Limitations:* Every architectural problem is bounded by limits, whether it be a room, a building, or a city. One may not satisfactorily or safely offer an imaginative solution unless these limits are clearly stated, defined, and *more*, truly understood. There are not only practical limits but there are other limitations of the spirit which bound our affairs.

We are apt to confuse and confine economics with the problems confronting the banker fraternity, whereas they arise continually to limit our efforts; not alone the economics of money but those of effort and especially the relationships between handicraft methods and new machine techniques.

Anticipation of hoped for results often influences the economics of building to its detriment.

The architect must join in a very definite attempt to bring intellectual order out of the chaotic relationships between the material possibilities of our civilization and our continued spiritual needs.

An appreciation that the limits, whether they are financial or spiritual, are a real part of any architectural problem is a very necessary part of education.

*Imagination:* Most architectural imagination has nothing to do with these three previous factors, but is generally a rehash of the imaginings of others.

It should not be difficult to understand that imagination is no "will-o'-the-wisp" but can be solidly based on knowledge, experience, and fixed limitations; that the mind unsupported by these can never be a successful springboard for genius.

The world is apt to think that the genius of imagination is something which flames into being without background.

Nothing is further from reality, for imagination at best is a free presentation of coordinated thought and well digested experience. It is a marked ability to visualize a solution from ascertained facts. Imagination is much too often confused with gusty romance, or in

architectural education a lusty and at the same time weary filling up of a steady crescendo of enlarged mounts of paper; the cute contrast of white circulation, the meaningless circles, the dippy dots which filled up the vacuity of ideas, and which at the same time paraded as imagination. It never was reasonable!

We are beginning to understand that more real imagination is required to put together beautifully a limited number of ideas and achieve design.

\* \* \* \* \*

What is wrong with architectural education?

The great difficulty is that it has tried to make draftsmen and not broadly educated men. Another fault is that it has divorced itself from actual practice, therefore it could not be anything but imitative. Withdrawn from reality, the architect has been trained to forget today's values, to prize the work of the past, and to be fearful of the finger of scorn, especially as an accusation of bad taste. He has been swaddled in lavender and old lace. Meanwhile, because of a bad training in architecture and the arts, and at present a lack of a true philosophy of architecture, the machine age and its prototype the factory is carrying on to repletion a sterile reign of ugliness.

From 1900 on, as regards architecture, have been years of transition and the beginnings of a revolt against the restrictions of the past. Throughout the world, architects, working under conditions appreciated as belonging especially to their generation, have stressed the need for a new approach more consonant with these conditions, and have attempted to meet them with a philosophy related to new ways and new ideas.

Are we foolhardy if we put on the prophet's cap and say that the next generation will continue to be in revolt against the past? Are not all the indications pointing toward a struggle of youth to find himself politically, economically, and emotionally in a new world? Must not then architectural education anticipate, in part at least, the vision of the result to be gained by that struggle?

And it is not enough to say the answer is the "*machine*."



# GUPTILL'S CORNER

Happy New Year, folks! And I'm mighty certain it will really be a happier one for many of us than some of those of the recent past.

Sorry I slipped up on my usual Christmas wishes. You see much of this Corner is customarily written well ahead of time, and I just didn't realize, in my excitement about the new competition and everything, when the deadline was reached. And thanks for the greetings I had from some of you! You were "swell" to remember me.

Speaking of the competition, it's queer how your mind gets running on, sometimes. I was walking along a wooded country roadway the other day, and got to thinking of the trees—of how so many of you folks all over the land were sketching trees of one kind or another to send in to our latest sketching contest (see December issue). Perhaps I was a bit daft for a minute (my good friend the eminent psychiatrist Dr. Carroll Leja Nichols says we are often on the border line), but I had the fancy that the trees were nodding and whispering their approval of the fact that all us folks were giving them a bit of friendly attention.

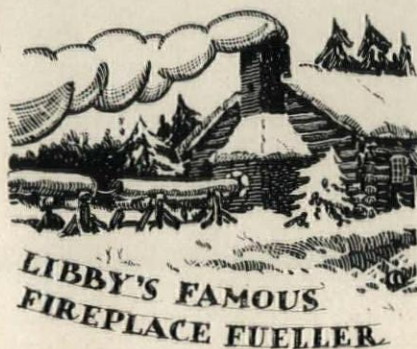
As to trees, I'm writing this in the Adirondack and Green Mountain region where I came for the holidays, and where "trees is trees," to paraphrase Ellis Parker Butler. And, strangely enough, the talk the other night at the local tall story club, of which I have long been proud to count myself a member (though what whoppers some of those fellows tell!), fell around this very subject.

I suppose I really started it on that track myself, though quite unintentionally. Like every architect, as soon as I found that Bascom's fireplace smoked a bit (Bascom was our host that night) because the builder hadn't understood the proper relationship between opening size, flue area, and chimney height, I got to talking shop. Soon I fell to telling the boys about the real he fireplaces we used to have down in my part of the country when I was a boy. And the enormous amount of wood they consumed.

"You see, folks," I began, "we had to depend on fireplaces for all our heat. When I was twelve or so, and Uncle Roscoe Libby was pretty well grown, he made up his mind that after years of filling wood boxes, to say

nothing of all the preliminary chopping, hauling, and splitting, he was going to try his darnedest to think up some way to lessen his labors. Being ingenious, he soon worked out an idea that I think will interest you, unless by chance you are already familiar with his 'Libby's Log Luger and Labor Lightening Fireplace Fueller.'

"'Twas based on a simple principle. He merely built a huge fireplace in his outside wall, same as most folks had in those parts. 'Twas the indoor type, of course, and its only odd feature (at least at first) was a round hole about a



foot and a half in diameter right plumb through the back of it into the outer air, with a tricky sort of iron door arrangement, quite like a giant camera shutter, to close over this opening to keep out the cold.

"But don't get the notion that his intention was merely to open this door and throw wood onto the fire now and then from outside. No, sir, nothing as simple as that! Instead, he rigged up outdoors a sort of carriage of rollers much like you find in a sawmill, and at such a height that he could feed the butt end of a log right into the fireplace, his tricky doors automatically adjusting themselves fairly well around the log. Then he built his fire as usual (poor man, he *did* have to lug a few kindlings), and as he burned off the end of his log, he gradually cranked more in, as necessary!"

"That was quite a stunt," remarked Doc Weir, a bit cynically, and trying to slip a wink to Judd Peters without me knowing it, "but don't try to make us believe that such a contraption would really work."

"Work!" I retorted, a wee bit peeved but unruffled (for when I'm telling the truth doubts like his never faze me). "Of course it worked, or why would I waste my breath telling you about it? I admit it had its failings at first, but Uncle Roscoe was not stumped. Not he. You see it *was* something of a job to keep cranking the log into position, despite the fact that he had the carriage pitched so that gravity helped a lot. So one fall he chewed a half dozen dime hunks of

Fireman's cut plug away, ruminating over the matter, and then on Thanksgiving morning, when he was sitting before the fire cracking nuts for Aunt Sarah, and pausing now and then to give the log-adjusting crank a turn or two, the idea came! And up he jumped and at the thing he went, hammer and tongs, despite Sarah's vehement expostulations, and by nightfall he had doped out the scheme which made his name a fireside word all through that section.

"You see he had noticed what a draft there was in that chimney, which was husky and tall, so he built a big fan in the flue, like the jacks that were used to turn the spits in the old-time houses of Merrie England. This he geared to his log-propelling crank by means of a drive chain and sprocket wheels, and say!—the faster the fire burned the greater the draft became, rotating the fan, turning the crank, and drawing the log into the flames by degrees, exactly as needed!"

Frankly, I didn't quite like the expression on two or three faces as I concluded this recitation, nor the ominous silence that followed. You know how it is when you try to make something clear, and then feel you have failed, or you sense an element of doubt that pains your honest soul. I was relieved when Harry Osborne took the floor. Like many farmers, he seldom speaks, but always listens with patience and understanding. And when he does say something, there is point to it.

"Your uncle couldn't have done that up where I come from," he drawled.

"Why not?" I queried.

"Well, I'll tell you. You see the snow gets mighty deep up there—three, four, five feet on the level. And the logs would all get buried. Soon's the first one was burnt, you couldn't find another."

"I forgot to mention," I retorted, "that Uncle Roscoe had thought of that very thing. So almost from the first he strung his logs up through the back pasture all the way to the wood lot a half mile or so from the house. And he fastened them end to end with cinch chains, and, believe it or not, that chimney jack of his just nosed the whole thing along. Time came when he got his system down so pat that by hauling two or three logs to the house with his oxen in the fall, just to sort of prime the thing (like a dipper of water in a reluctant pump), he could pull as many more as he needed all the way from the wood lot automatically."

"Now, Guppy," Joe Dyer interrupted, "we never aim to doubt no



yarn that has a semblance of truth, but you have stepped a bit too far, seem's to me. No jack could draw logs like that, and, furthermore, sooner or later some of them would have froze fast, and then what?"

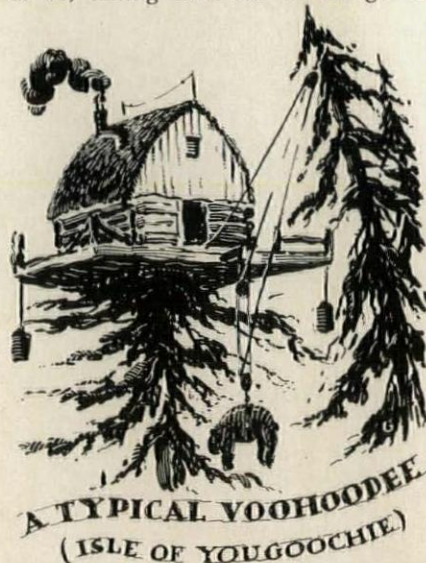
"I'll forgive your doubts, Joe," I replied, "for you haven't the inventive sense that Uncle Roscoe possessed. I admit he was treed a bit at first (no pun intended), but you must remember that that was a cold country with lots of snow, and 'twas necessary to keep a fire all the time. That was the point to the whole thing. Quite naturally considerable snow worked in with the logs, or melted and ran in around them. Well, sir, he rigged a boiler right there, caught this snow and water and turned it to steam, which was easy with such a fire. Part of this steam he piped back along the log row to prevent freezing. Didn't need it often, though, for by releasing a bit now and then, letting it condense and freeze, the logs would come slipping along on a glare of ice just as nice as could be. All excess steam he piped to the jack, to give it whatever reinforcement it needed at times of particular strain."

It was Joe Weaver who pulled himself up in his chair at this point. "Now fellers," he began, "don't throw things at Gup. Remember he's a city feller now and can't take it. And I, for one, don't have no reason to doubt his yarn, for I've seen an arrangement stranger than this rig he claims his uncle invented. And it was a practical one, too. Toss another of them birch sticks onto our fire there, Bascom—you're host tonight, you know—and hand me one of them nickel Coronys, Harry, and I'll spin yer the how of it."

"This was when I was jest into long pants, and had took to goin' a vessel-ing from Yarmouth and them ports. In '89 it was (or so I reccecleck) that our ship got froze in way up north in Baffin Bay, and a native saved our lives by guiding us over the ice to his village on the island of Yougoochie. Talk about snowfall! That's where they have it! And the bears and sich wild animuls—simply monsters! You've hearn me tell about some of 'em before. The Yougoochians couldn't build houses like most folks—not even igloos and sich—for, come the depth of winter, they'd be buried in a hunnerd foot of snow."

"But didja ever notice how nature has its compensations? It's at Yougoochie that they grow them great pine trees, taller than tall and straighter than straight. And what a part them trees play in the Yougoochians' lives. Leastwise it was so back in them days. Why, sir, when autumn

came and 'twas time ter expect the first of them great snowfalls, each family would pack its skins and other belongings and climb a pine tree. Then they'd trim off the upper fifty feet or so, taking care not to let go of



her—that left 'em maybe two hunnerd or two hunnerd fifty feet clear of the ground—and next they'd hack off some of the highest branches, too, and from all this material they'd make them as snug a little wood and brush hut as you ever see—a 'voohodee,' they called it. The stub of the trunk, mind you, would be sticking a foot or two above the floor through a hole right in the middle.

"Then, just about like Gup's uncle done, they'd take some of the branches for kindling (and huge cones, too, each as big as a kag of salt mackerel), and light a fire around the lopped off stump. They had clay swabbed about, mind you, to form a sort of harth. So having seen all this with my own eyes, I don't have no skepticism about the way Gup's Uncle Roscoe fetched in his firewood."

The silence that followed was broken by Harry. "What I don't jest follow, Joe," he offered, "(and it makes me wunder if even you ain't a yarnin' a bit this time), is how they hauled that there tree up into the hut wunst they'd burnt a foot or two off the stub!"

Joe flicked the ash from his cigar. "I am glad," he replied, "that you brought that up. You must remember that these folks was well above the snow level, generally. And I should have said that the hut was only supported by the branches below it. So every day or two they reached down through trap doors made in the floor for such purposes, and trimmed away the few branches they needed to use with the trunk for firewood. And then they'd hang on while the whole

thing slithered down a piece, leaving the trunk stub once more projecting above the harth high enough to burn again. And that was that!

"They had it figgered out that one of them big trees would just about winter 'em through. Often, though, they'd build on the center tree of a clump, and if necessary would hack off a few neighboring branches as they went down by."

"Now and then," he went on, "there'd be an open winter, which made it a bit onhandy, for all the game that generally wouldn't be too far below their own level (the snow would be firm enough to support most anything) would be far, far beneath. But they allus took the precaution when they clum the tree in the fall to paint muscagle oil all up the trunk. This not only caused the hut or voohodee to slip down the trunk more easily, at the same time making the green wood more inflammable, but it naturally drew lots of game. By shooting straight down they could easy shoot a bear or warpass."

"Wasn't it quite a job, Joe," I ventured, "to get the carcass up to the voohodee? Or to climb way down?"

"One might think so," he returned, "though I forgot to say that generally every fambly each fall made a line fast to the top of a nearby tree, and rigged a tackle to it, so as the voohodee slid down, its weight automatically pulled up anything they had hitched to a line below. 'Twas simply marvelous how them iggerant people, way off there in the frozen north, understood the laws of histing. They'd have things geared so a foot drop in the hut might fetch a light object up a hunnerd feet. Heavy objects was purty slow a comin' up. If they shot a bear they'd lasso it, and then just set till gravity pulled it up to them! 'Twas mebbly a bit tedious waitin', but time want northin' to them, nohow."

Well, Cornerers, I wish I could go on repeating more of those yarns that were told that night (and trees were involved in most of them), but I imagine you'd be sending explosive packages to me via the mail if I did, so I'll leave the tall story club still in session and get back to my legitimate prattle, or whatever you choose to call it.

Oh, oh! I find my space is about filled. Just room to give you the hot dope that we have arranged for two of the Judges on the Sketch Competition. And are we proud! For they are no less famous individuals than Ernest Watson of Eldorado Page fame and Theodore Kautzky, winner of a previous Corner Competition, and featured in a recent PENCIL POINTS article.